Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 25.07.97 : ISO 4113

Combination No. : 0 402 796 818

Injection pump

Pump designation : PES6P120A720RS7356

EP type number : 0 412 726 919

Governor

Governer design. : RE30

Governer no. : 0 421 890 017

Cust. part No. : RE 66463

Customer-spec. information

Customer : DEERE Motor : 6081 AF001 Power KW : 205.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C Tolerance $^{\circ}$ C : \leftarrow 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 2.0 Tolerance bar : \leftarrow 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS No basic setting. Setting of constant delivery under Section C.

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : ← 1.0

Prestroke mm : 3.60Tolerance mm : $\leftarrow 0.05$ Check

tolerance m : \leftarrow 0.10

Rack travel in mm : 10.50 : **←** 0.50 Tolerance mm

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

: **←** 0.50 Tolerance

Check

tolerance *NW : \leftarrow 0.75

Start of delivery blocking

*NW after s.o.d. : 7.50 Tolerance : \leftarrow 0.50

Check

tolerance *NW : ← 0.75

Barrel no. : 1

Beginning of delivery difference

and maximum rack

: 15.00 travel

Difference * CS : 2.50 (B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 VTESTING & SETTING RACK TRAVEL SENSOR **POSITION** Engine speed min-1: Setting point (P, R and H pump) : 3.16 : 13.00 Uact V 3.100 CRT mm Tolerance mm : +/- 0.05 Check tolerance mm : +/-0.10Check value (P, R and H pump) 1.700 Uact V CRT mm 6.15 : +/- 0.25 Tolerance mm Chalk : +/- 0.30 tolerance mm Setting point (M pump) Uact V 3,100 12.50 CRT mm : +/- 0.05 Tolerance mm Check : +/- 0.10 tolerance mm Check value (M pump) Uact V 1.700 CRT mm 5.50 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30 Stop position

: Value with

deenergised adjusting magnet

stop position. 0.75

and control rod in

Uact V

CRT mm

A02

Tolerance mm : \pm +/- 0.25 Check tolerance mm : ± -0.35 ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps) Test with control rod in stop position Engine speed min-1: 60 Amplitude V Tolerance V : +/- 0.6 Check : +/- 1.20 tolerance V Engine speed min-1: 600 Difference Amolitude to Amplitude V : max.1.4 (C) INJECTION PUMP WITH POSITIONER TEST POINT V1 Rated speed rpm : 1050 Uact V Del. quantity cm3/1000 strokes : 213.0 Tolerance cm3/1000 strokes : \leftarrow 1.0 Check tolerance cm3/1000s. : +-Spreed Tolerance cm3/1000 strokes : Check tolerance cm3/1000s. FUEL DELIVERY CHARACTERISTICS Rated speed rpm Uact V Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : \leftarrow 3.0 Check tolerance cm3/1000s. : +-Spreed Tolerance cm3/1000 strokes :

1.4

3.030

5.0

9.0

700

3.120

6.0

8.0

12.0

Check tolerance cm3/1000s. TEST POINT L1

Rated speed rpm : 450 Uact V : 1.740 Tolerance Volt : +- 0.060 Check tolerance : **←** 0.060 Volt Del. quantity cm3/1000 strokes : 26.0 Tolerance cm3/1000 strokes : \leftarrow 3.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance 10.0 cm3/1000s. :

STARTING FUEL DELIVERY

Rated speed rpm :

Uact V : 4.550

Del. quantity

cm3/1000 strokes : 120.0

Tolerance

cm3/1000 strokes : + 20.0

Check tolerance

cm3/1000s. : + 25.0

100

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 20.08.97 Test oil : ISO 4113

Combination No. : F 002 A0Z 057

Injection pump

Pump designation : PES4A95D32D/3RS2927

EP type number : F 002 A10 017

Governor

Governer design. : RSV475...1250A0c936R

Governer no. : F 002 A20 241

Cust. part No. : 3930145

Customer-spec. information

Customer : CDC

Motor : 4BNA3.9 Power KW : 59.7

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : $\leftarrow 0.1$

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

A04

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION FUMP SETTING VALUES Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : 2.85 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270 Tolerance : +- 0.50

Check

tolerance *NW : **←** 0.75

Start of delivery blocking

*NW after s.o.d. : 8.50 Tolerance : \leftarrow 0.50

Check tolerance *NW : ← 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 10.20

Tolerance mn: \leftarrow 0.05

Del. quantity + cm3/1000 strokes : 92.0	- Aneroid pressure - hPa : -
Tolerance	- Del. quantity - cm3/1000 strokes : 92.0 - Tolerance
Check tolerance	- cm3/1000 strokes : +- 1.0 - Check tolerance
cm3/1000s. : +- 3.0	- cm3/1000s. : +- 3.0 - Spreed
Spreed	Tolerance : 3.5
Tolerance cm3/1000 strokes : 3.5	- Check tolerance - cm3/1000s. : 6.0
Check tolerance cm3/1000s. : 6.0	-
	- CONTROL LEVER
Rated speed rpm : 475	control lever position degree : 91.0 tolerance degree : +- 4.0
Rack travel in mm: 4.60	- toter ance degree . • 4.0
Tolerance mm : + 0.10	- RATED SPEED
Del. quantity + cm3/1000 strokes : 13.5 +	- rack travel mm : 9.20 - Rated speed rpm : 1320
Tolerance	- Tolerance 1/min : + 5
cm3/1000 strokes : + 2.0	_
Check tolerance	- rack travel mm : 4.00
cm3/1000s. : +- 4.5	- Rated speed rpm : 1380
Tolerance	- - rack travel mm : 0.85
cm3/1000 strokes : 3.5	- Tolerance mm : + 0.55
Check tolerance	- Rated speed rpm : 1450
cm3/1000s. : 5.5	- - rack travel mm : 4.00
I	- rack travel mm : 4.00 - Rated speed rpm : 1385
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Tolerance 1/min : + 15
<u> </u>	
GUIDE SLEEVE POSITION	- LOW IDLE
control lever	- control lever
position degree : - 3	position degree : 70.0
Rated speed rpm : 800	tolerance degree : + 4.0
Rack travel in mm : 0.50	Control lever difference
Tolerance mm : + 0.20	- Grad : 20.0 - tolerance degree : +- 6.0
governor spring	- total alice deglee . +- 0.0
pre-tension +	- Setting point w/out bumper spring
click setting x : 3.50	
	- Rated speed rpm : 475 - rack travel mm : 4.10
FULL LOAD DELIVERY AT FULL LOAD STOP	- rack travel mm : 4.10 - Tolerance mm : +- 0.10
Rated speed rpm : 1250	- Rated speed rpm : 100
†	•

CRT mm min. : > 19.00 Testing: Rated speed rpm 475 4.60 rack travel mm : +- 0.10 Tolerance mm TORQUE CONTROL Rated speed rpm : 1250 10.20 rack travel mm : **←** 0.05 Tolerance mm : 600 Rated speed rpm STARTING FUEL DELIVERY 100 Rated speed rpm rack travel mm : 20.50 Tolerance mm : **+-** 0.50 Del. quantity cm3/1000 strokes : 120.0 Tolerance cm3/1000 strokes : \leftarrow 10.0 Check tolerance cm3/1000S. : +- 15.0 LOW IDLE Rated speed rpm : 475 Rack travel in mm: 4.60 Tolerance mm : ← 0.10 Del. quantity cm3/1000 strokes : 13.5 Tolerance cm3/1000 strokes : \leftarrow 2.0 Check tolerance cm3/1000S. : +- 4.5 Spreed Tolerance 3.5 cm3/1000 strokes : Check tolerance : 5.5 cm3/1000s.

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 19.08.97 : ISO 4113 Test oil Combination No. : 0 401 846 849 Injection pump Pump designation : PE6P12OA32ORS3196 EP type number : 0 411 826 763 Governor Governer design. : RQV200...1100PA729 : -1 Governer no. : 0 421 813 470 Cust. part No. : Customer-spec. information Customer : SCANIA : DS9 06 Motor TEST BENCH REQUIREMENTS Inlet line : 3.1 Vibration damper (RoBo diaphragm): 4.2 Test oil inlet temp. °C Tolerance *C : +- 2.0 Overflow valve : 1 417 413 025 Inlet press. bar : 2.5 Test nozzle holde : 1 688 901 019 assembly

Outside diameter : 6.0 x inside diameter : 3.0 x length mm : 600 REMARKS (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values ____ BEGINNING OF DELIVERY Test pressure bar : 26.0 Tolerance bar : + 1.0 Prestroke mm : 5.05 Tolerance mm : +- 0.05 Check tolerance mm : +- 0.10 Rack travel in mm: 10.50 Tolerance mm : + 1.50 Firing order : 1-5-3-6-2-Phasing : 0-60-120-180-240 : -300 Tolerance : +- 0.50 Check tolerance *NW : + 0.75 Start of delivery mark Tolerance : \leftarrow 0.50 Check tolerance *NW : + 0.75 Barrel no. : 1 BASIC SETTING Rated speed rpm : 225

Test lines : 1 680 750 015

Opening pressure bar : 208.5 Tolerance bar : + 1.5

		1
Rack travel in mm	5.00	
Tolerance mm	: ← 0.10 -	
Del. quantity		LOW IDLE
cm3/1000 strokes	: 24.0	}
Tolerance		
cm3/1000 strokes	: +- 2.0 -	control lever
Check tolerance cm3/1000s.	: +- 4.0	position degree : 64.0
Spreed	: 4.0	tolerance degree : +- 4.0
Tolerance		control lever
cm3/1000 strokes	: 3.0	position degree : 9.0
Check tolerance	-	tolerance degree : +- 4.0
cm3/1000s.	: 6.0	
	-	Setting point w/out bumper spring
(B) SETTING OF IN	LIECTION DUMP	† Pated speed rpm : 100
WITH GOVERNOR	40EC110I4 FONE	rated speed rpill . 100
W2711 00121(101)		CRT mm min. : > 6.20
	-	-
		Testing:
GUIDE SLEEVE POSI	TION -	<u> </u>
	•	Rated speed rpm : 225
control lever	•	rack travel mm : 5.00
position degree	: - 1	Tolerance mm : + 0.10
Rated speed rpm		rack travel mm : 2.00
nacea opeca i piii	. ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Rated speed rpm : 330
Rack travel in mor	n: 16.50 -	Tolerance 1/min : + 30
Tolerance mm	: ← 1.30	+
		TODOUS CONTROL
		TORQUE CONTROL
CONTROL LEVER		Rated speed rpm : 1100
		rack travel mm : 10.45
control lever		Tolerance mm : +- 0.05
position degree		
tolerance degree	: + 4.0	
control lever		
position degree	: 114.0	FUEL DELIVERY CHARACTERISTICS
tolerance degree		
RATED SPEED		Aneroid pressure
rack travel mm		hPa : -
Rated speed rpm		Rated speed rpm : 1100
Tolerance 1/min Check	: +- 5	Del. quantity cm3/1000 strokes : 149.0
speed 1/min	: + 15	Tolerance
opeca (/iliff)		cm3/1000 strokes : +- 4.0
rack travel mm	: 4.00	Check tolerance
Rated speed rpm		$cm3/1000s.$: \leftarrow 6.0
Tolerance 1/min	: +- 15	+
Check	. 20	
speed 1/min	: - 20	STARTING FUEL RELIVERY
rack travel mm	: 0.50	STARTING FUEL DELIVERY
Tolerance mm		Rated speed rpm : 100
Rated speed rpm		rack travel mm : 20.50
	-	Tolerance mm : +- 0.50

Del. quantity cm3/1000 strokes : 355.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance

cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm : 225 5.00 Rack travel in mm : : +- 0.10 Tolerance mm Del. quantity cm3/1000 strokes : 24.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 19.08.97 : ISO 4113

Combination No. : 0 401 846 950

Injection pump

Pump designation : PE6P110A720RS3289 EP type number : 0 411 816 781

Governor

Governer design. : RQV200...1100PA555

: -5

Governer no. : 0 421 813 943

Cust. part No. : 1333234

Customer-spec. information Customer : SCANIA Motor : DS11 63A

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration

damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C 40 Tolerance *C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

: 251.5 bar Tolerance bar : +- 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 3.35 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.50

Check

tolerance $^{\circ}NW$: + 0.75

Start of delivery mark

Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 325

Rack travel in mm : 6.60

Tolerance mm : +- 0.10	•
Del. quantity + cm3/1000 strokes : 22.0 +	- LOW IDLE
Tolerance +- 3.0 +-	- -
Check tolerance	- control lever
cm3/1000s. : + 6.0	position degree : 69.0
Spreed + Tolerance +	tolerance degree : +- 4.0
cm3/1000 strokes : 4.0	- control lever
Check tolerance	position degree : 16.0
cm3/1000s. : 8.0	tolerance degree : +- 4.0
+	Setting point w/out bumper spring
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	- - Rated speed rpm : 225
‡	- - CRT mm min. :> 8.80
CHIPE CLEENE DOCTATON	-
GUIDE SLEEVE POSITION	- Testing: -
+	- Rated speed rpm : 325
control lever	rack travel mm : 6.60
position degree : - 1 Rated speed rpm : 1130	- Tolerance mm : +- 0.10
1	- Rated speed rpm : 310
Rack travel in mm: 16.50	•
Tolerance mm : +- 1.30	- TORQUE CONTROL
+	•
CONTROL LEVED	- Rated speed rpm : 1100 - rack travel mm : 12.35
CONTROL LEVER	Tolerance mm : $+$ 0.05
control lever	•
position degree : 62.0	- ANEROID/ALTITUDE
tolerance degree : +- 4.0	- COMPENSATOR TEST
control lever	•
position degree : 116.0 tolerance degree : + 4.0	- - SETTING
toterance degree 4.0	2F11IAQ
RATED SPEED	Rated speed rpm : 500
rack travel mm : 11.30 + Rated speed rpm : 1145 +	- Pressure hPa : 1500 - rack travel mm : 12.35
Rated speed rpm : 1145 + Tolerance 1/min : +- 5	- Tolerance mm : +- 0.05
Check	•
speed 1/min : +- 10	- Rated speed rpm : 500 - Pressure hPa : -
rack travel mm : 4.00	- ressure nea : rack travel mm : 10.00
Rated speed rpm : 1280	- Tolerance mm: : + 0.20
Tolerance 1/min : +- 15	. MS A OUR PARENT
Check to the speed 1/min : + 20	- MEASUREMENT -
	- Rated speed rpm : 500
rack travel mm : 0.50	-
Tolerance mm : + 0.50 + Rated speed rpm : 1400 +	- Pressure hPa : 140 - rack travel mm : 10.80
Naced Speed (pill) . 1400	- Tolerance mm : +- 0.15
1	- Pressure hPa : 200
1	· · · · · · · · · · · · · · · · · · ·

rack travel mm : 11.75 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure hPa

Rated speed rpm : 1100

Del. quantity

cm3/1000 strokes : 164.0

Tolerance

cm3/1000 strokes : +- 4.0

Check tolerance

cm3/1000s. : +- 6.0

Aneroid pressure

hPa : ~ Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 114.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Del. quantity

cm3/1000 strokes : 265.0

Tolerance

cm3/1000 strokes : \leftarrow 20.0

Check tolerance

cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm : 325

Rack travel in mm : 6.60 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 22.0

Tolerance

cm3/1000 strokes : +- 3.0
Check tolerance

cm3/1000s. : +- 6.0

Spreed

Tolerance

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 19.08.97 : ISO 4113

Combination No. : 0 401 846 986

Injection pump

Pump designation : PE6P110A720RS3289-1 EP type number : 0 411 816 795

Governor

Governer design. : RQ900PA1153 Governer no. : 0 421 801 724

Cust. part No. : 1363597

Customer -spec. information Customer : SCANIA : DS1193A Motor

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Tolerance l/h: \leftarrow 10.0

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 3.35
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 : +- 1.50 Tolerance mm

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.50

Check

tolerance °NW : **←** 0.75

Barrel no. : 1

BASIC SETTING

Rack travel in mm Tolerance mm		+	ASSEMBLY GOVERNOR	? SETTING
Del. quantity cm3/1000 strokes		+	Rated speed rpm rack travel mm	
Tolerance cm3/1000 strokes Check tolerance	: +- 4.0	‡	Rated speed rpm Tolerance 1/min	: 946 : +- 4
Check tolerance cm3/1000s. Spreed	: +- 6.0	+	rack travet mm	: 4.00
Tolerance cm² 1000 strokes Check tolerance		İ	rack travel mm Tolerance mm Rated speed rpm	: +- 0.50
cm3/1000s.	: 9.0	+		
(B) SETTING OF IN	JECTION PUMP	++++	Rated speed rpm rack travel mm	: 901 : 11.30
GUIDE SLEEVE TRAV	EI	}	Rated speed rpm Tolerance 1/min rack travel mm	: +- 4
GOIDE STEENE LKWA	CL	Ţ	rack travet mm	: 4.00
Rated speed rpm guide sleeve travel mm Tolerance mm		<u>†</u>	rack travel mm Tolerance mm Rated speed rpm	: +- 0.50
Tolerance mm	: + 0.10	+	Nated Speed I pill	. 1000
Rated speed rpm guide sleeve travel mm		+	Rated speed rpm rack travel mm	
travel mm Tolerance mm	: +- 0.10	T	Rated speed rpm Tolerance 1/min	: 948 : + 4
Rated speed rpm guide sleeve		+	rack travel mm	: 4.00
guide sleeve travel mm Tolerance mm	: 16.80 : + 0.10	†	rack travel mm Tolerance mm Rated speed rpm	: +- 0.50
Rated speed rpm guide sleeve		-		
travel mm Tolerance mm	: 10.00 : +- 0.10	†	Rated speed rpm rack travel mm	: 903 : 11.30
Rated speed rpm guide sleeve		+	Rated speed rpm Tolerance 1/min	
travel mm Tolerance mm	: 11.50 : +- 0.50	+	rack travel mm	
		‡	rack travel mm Tolerance mm Rated speed rpm	: +- 0.50
CONTROL LEVER		I	Rated Speed (pill	. 1000
control lever position degree tolerance degree	: 22.0 : + 4.0	+	Rated speed rpm rack travel mm	: 904 : 11.30
	4.0	+	Rated speed rpm	
control lever position degree tolerance degree	: 84.0 : + 4.0	Ī	Tolerance 1/min rack travel mm	
Total alloc degree		+	rack travel mm Tolerance mm	: 0.50 : +- 0.50

Rated speed rpm	;	1000
Rated speed rpm rack travel mm	:	905 11.30
Rated speed rpm Tolerance 1/min rack travel mm	+-	951 - 4 4.00
rack trave! mm Tolerance mm Rated speed rpm	: +-	0.50 - 0.50 1000

ANEROID/ALTI	TUDE
COMPENSATOR	TEST

SETTING

Rated speed rpm	:	500
Pressure hPa	:	1500
rack travel mm	:	12.35
Tolerance mm	:	+- 0.05

Rated speed rpm	:		500
Pressure hPa	:		-
rack travel mm	:		10.00
Tolerance mm	:	+	0.20

MEASUREMENT

Rated	speed	rpm		500
-------	-------	-----	--	-----

Pressure hPa	:	140
rack travel mm	:	10.80
Tolerance mm	: +-	0.15

Pressure hPa			200
rack travel mm	•		11.75
Tolerance mm	:	+-	0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure			
hPa	•		-
Rated speed rpm	:		500
Del. quantity			
cm3/1000 strokes	:		114.0
Tolerance			
cm3/1000 strokes	:	+-	1.0
Check tolerance			
cm3/1000s.	:	+-	4.0

STARTING FUEL DELIVERY

Tolerance mm	: 100 : 20.50 : +- 0.50
Del. quantity cm3/1000 strokes Tolerance	: 265.0
cm3/1000 strokes Check tolerance	: +- 20.0
cm3/1000s.	: + 24.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 19.08.97 Test oil : ISO 4113

Combination No. : 0 401 846 987

Injection pump

Pump designation : PE6P110A720RS3289-1 EP type number : 0 411 816 795

Governor

Governer design. : RQ750PA1153-1 Governer no. : 0 421 801 725

Cust. part No. : 1363596

Customer-spec. information Customer : SCANIA Motor : DS1193A

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5
Tolerance bar : +- 0.1

Tolerance l/h: +- 10.0

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

bar : 251.5 Tolerance bar : ← 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerar e "NW : +- 0.75

Barrel : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm	12 35	+ Rated speed rpm : 793 + guide sleeve
Tolerance mm	: +- 0.05	travel mm : 10.00 + Tolerance mm : +- 0.10
Del. quantity cm3/1000 strokes	: 172.0	+ Rated speed rpm : 850
Tolerance cm3/1000 strokes	: +- 1.0	travel mm : 11.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s.	: +- 4.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Spreed	Augustus gata della dilla dilla dilla diggi aggi ngga talla tiligi dilla dilla diggi nagangga dilla diggi	Rated speed rpm : 700 Aneroid pressure
Tolerance cm3/1000 strokes	: 8.0	hPa : 1500 Del. quantity cm3/1000 strokes : 172.0
Check tolerance cm3/1000s.	: 12.0	Tolerance : +- 1.0 Check tolerance
		cm3/1000s. : +- 4.0 Spreed Tolerance
Rack travel in m Tolerance mm	1 : 4.80 : +- 0.10	cm3/1000 strokes : 8.0 Check tolerance
Del. quantity cm3/1000 strokes	: 19.0	cm3/1000s. : 12.0
Tolerance cm3/1000 strokes	: +- 4.0	
Check tolerance cm3/1000s.	: +- 6.0	+ CONTROL LEVER
Spreed Tolerance cm3/1000 strokes	: 5.0	<pre>control lever position degree : 36.0 tolerance degree : + 4.0</pre>
Check tolerance cm3/1000s.	: 9.0	control lever
(B) SETTING OF IN	NECTION PUMP	+ position degree : 98.0 + tolerance degree : + 4.0
WITH GOVERNOR	OCCITON FORF	ASSEMBLY GOVERNOR SETTING
GUIDE SLEEVE TRAV	/EL	Rated speed rpm : 750
Rated speed rpm	: 759	rack travel mm : 11.30
guide sleeve travel mm	: 6.81	+ Rated speed rpm : 788 + Tolerance 1/min : + 4
Tolerance mm		rack travel mm : 4.00
Rated speed rpm guide sleeve travel mm		rack travel mm : 0.50 Tolerance mm : + 0.50
Tolerance mm		+ Rated speed rpm : 850
Rated speed rpm guide sleeve		Rated speed rpm : 751 rack travel mm : 11.30
travel mm Tolerance mm	: 17.21 : +- 0.10	Rated speed rpm : 789 Tolerance 1/min : +- 4

rack travel mm	: 4.00	†
reck travel mm Tolerance mm Rated speed rpm	: +- 0.50	ANEROID/ALTITUDE COMPENSATOR TEST
Rated speed rpm	: 752	SETTING
rack travel mm	: 11.30	Rated speed rpm : 500 Pressure hPa : 1500
Rated speed rpm Tolerance 1/min rack travel mm	: +- 4	Pressure hPa : 1500 rack travel mm : 12.35 Tolerance mm : +- 0.05
rack travel mm Tolerance mm		Rated speed rpm : 500 Pressure hPa : - rack travel mm : 10.00
Rated speed rpm		Tolerance mm : +- 0.20
Rated speed rpm rack travel mm	: 753	# MEASUREMENT
		Rated speed rpm : 500
Rated speed rpm Tolerance 1/min rack travel mm	: +- 4	Pressure hPa : 200 rack travel mm : 11.75 Tolerance mm : +- 0.05
rack travel mm Tolerance mm Rated speed rom	: ← 0.50	Pressure hPa : 140 rack travel mm : 10.80 Tolerance mm : +- 0.15
Marca opeca (om	. 0,0	+ Total and Time
Rated speed rpm	: 754	Ţ
rack travel mm	: 11.30	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm rack travel mm Rated speed rpm Tolerance 1/min rack travel mm	: 11.30 : 792 : + 4	Aneroid pressure + hPa : -
rack travel mm Rated speed rpm Tolerance 1/min	: 11.30 : 792 : + 4	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity
rack travel mm Rated speed rpm Tolerance 1/min rack travel mm rack travel mm	: 11.30 : 792 : + 4 : 4.00 : 0.50 : + 0.50	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes : +- 1.0
rack travel mm Rated speed rpm Tolerance 1/min rack travel mm rack travel mm Tolerance mm	: 11.30 : 792 : + 4 : 4.00 : 0.50 : + 0.50 : 850 : 755	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 114.0 Tolerance
Rated speed rpm Tolerance 1/min rack travel mm rack travel mm Tolerance mm Rated speed rpm Rated speed rpm rack travel mm Rated speed rpm rack travel mm	: 11.30 : 792 : + 4 : 4.00 : 0.50 : + 0.50 : 850 : 755 : 11.30 : 793 : + 4	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Rated speed rpm Tolerance 1/min rack travel mm rack travel mm Tolerance mm Rated speed rpm Rated speed rpm rack travel mm Rated speed rpm rack travel mm Rated speed rpm Tolerance 1/min rack travel mm	: 11.30 : 792 : + 4 : 4.00 : 0.50 : + 0.50 : 850 : 755 : 11.30 : 793 : + 4 : 4.00	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 STARTING FUEL DELIVERY Rated speed rpm : 100
Rated speed rpm Tolerance 1/min rack travel mm rack travel mm Tolerance mm Rated speed rpm Rated speed rpm rack travel mm Rated speed rpm rack travel mm	: 11.30 : 792 : + 4 : 4.00 : 0.50 : + 0.50 : 850 : 755 : 11.30 : 793 : + 4 : 4.00 : 0.50 : + 0.50	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : +- 0.50 Del. quantity
Rated speed rpm Tolerance 1/min rack travel mm rack travel mm Tolerance mm Rated speed rpm Rated speed rpm rack travel mm Rated speed rpm rack travel mm rack travel mm Tolerance 1/min rack travel mm rack travel mm	: 11.30 : 792 : + 4 : 4.00 : 0.50 : + 0.50 : 850 : 755 : 11.30 : 793 : + 4 : 4.00 : 0.50 : + 0.50	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 265.0 Tolerance
Rated speed rpm Tolerance 1/min rack travel mm rack travel mm Tolerance mm Rated speed rpm Rated speed rpm rack travel mm Rated speed rpm rack travel mm rack travel mm Tolerance 1/min rack travel mm rack travel mm	: 11.30 : 792 : + 4 : 4.00 : 0.50 : + 0.50 : 850 : 755 : 11.30 : 793 : + 4 : 4.00 : 0.50 : + 0.50 : 850 : 700	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 265.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 20.08.97 : ISO 4113 Edition Test oil

Combination No. : 0 401 849 759

Injection pump

Pump designation : PE10P120A520/4LS3866

EP type number : 0 411 829 712

Governor

Governer design. : RQ300/1150PA1322 Governer no. : 0 421 801 814

Cust. part No. :

Customer-spec. information Customer : DHI Motor : D2840L Power KW : 382.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0
Tolerance bar : +- 0.1

Overflow quantity

min. L/h : 225 Tolerance L/h : +- 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : ← 1.0

Prestroke mm : 4.30 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 10- 9- 4- 1- 8

: - 7- 6- 3- 5 : - 2

Phasing : 0-45-72-117-144

: -189-216-261-288

: -333

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance °NW : + 0.75

Barrel no. : 10

BASIC SETTING

Rated speed rpm : 1150

	1
Rack travel in mm : 12.00 Tolerance mm : +- 0.05	Rated speed rpm : 413 guide sleeve travel mm : 5.00
Del. quantity cm3/1000 strokes : 192.0	Tolerance mm : +- 0.10
Tolerance cm3/1000 strokes : + 1.0	+ Rated speed rpm : 490 + guide sleeve + travel mm : 6.00 + Tolerance mm : + 0.10
Check tolerance cm3/1000s. : + 4.0	Tolerance mm : +- 0.10 Rated speed rpm : 1450 guide sleeve
Spreed	travel mm : 11.50 Tolerance mm : +- 0.50
Tolerance cm3/1000 strokes : 7.0	+ GUIDE SLEEVE POSITION
Check tolerance cm3/1000s. : 10.0	T GOIDE SLEEVE POSITION
	control lever position degree : 109 Rated speed rpm : 600
Rated speed rpm : 300	Rack travel in mm : 20.00
Rack travel in mm : 6.90 Tolerance mm : + 0.10 Del. quantity	Tolerance mm : + 0.80
cm3/1000 strokes : 20.0 Tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : +- 3.0 Check tolerance	Rated speed rpm : 1150 Aneroid pressure
cm3/1000s. : ← 6.0 Spreed	hPa : 1500 Del. quantity
Tolerance cm3/1000 strokes : 6.0	+ cm3/1000 strokes : 192.0 + Tolerance
Check tolerance cm3/1000s. 9.0	+ cm3/1000 strokes : +- 1.0 - Check tolerance - cm3/1000s. : +- 4.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	<pre>Spreed Tolerance cm3/1000 strokes : 7.0</pre>
	Check tolerance cm3/1000s. : 10.0
GUIDE SLEEVE TRAVEL	‡
Rated speed rpm : 1222 guide sleeve travel mm : 6.37	CONTROL LEVER
Tolerance mm : + 0.10	control lever position degree : 31.0
Rated speed rpm : 300 guide sleeye	tolerance degree : +- 4.0
travel mm : 2.11 Tolerance mm : +- 0.10	<pre>control lever position degree : 93.0 tolerance degree : + 4.0</pre>
Rated speed rpm : 1150 guide sleeve	RATED SPEED
travel mm : 6.00 Tolerance mm : + 0.10	+ rack travel mm : 11.00 + Rated speed rpm : 1217

Tolerance 1/min : +- 5	† Tolerance mm : +- 0.05
rack travel mm : 4.00 Rated speed rpm : 1330 Tolerance 1/min : +- 15	Rated speed rpm : 500 Pressure hPa : - rack travel mm : 10.20 Tolerance mm : + 0.20
rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1450	MEASUREMENT
	Rated speed rpm : 500
LOW IDLE	Pressure hPa : 520 rack travel mm : 11.55 Tolerance mm : + 0.20
control lever position degree : 76.0 tolerance degree : +- 4.0	Pressure hPa : 400 rack travel mm : 10.75 Tolerance mm : + 0.05
control lever position degree : 14.0	Start interlock
tolerance degree : +- 4.0 Setting point w/out bumper spring	Rated speed rpm : > 100 Rated speed rpm : < 250
Rated speed rpm : 200	Check :> 80
CRT mm min. : > 9.36	+ Check + speed 1/min : < 270
Testing:	I
restrig.	FUEL DELIVEDY CHADACTERISTICS
Rated speed rpm : 300 rack travel mm : 6.90 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 410	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1500 Rated speed rpm : 650 Del. quantity
Rated speed rpm : 300 rack travel mm : 6.90 Tolerance mm : + 0.10 rack travel mm : 2.00	Aneroid pressure hPa : 1500 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 208.0 Tolerance
Rated speed rpm : 300 rack travel mm : 6.90 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 410	Aneroid pressure hPa : 1500 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 208.0
Rated speed rpm : 300 rack travel mm : 6.90 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 410 Tolerance 1/min : + 20 TORQUE CONTROL Rated speed rpm : 1150 rack travel mm : 12.00	Aneroid pressure hPa : 1500 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 208.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance
Rated speed rpm : 300 rack travel mm : 6.90 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 410 Tolerance 1/min : + 20 TORQUE CONTROL Rated speed rpm : 1150 rack travel mm : 12.00 Tolerance mm : + 0.05 Rated speed rpm : 650 rack travel mm : 12.00	Aneroid pressure hPa : 1500 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 208.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity
Rated speed rpm : 300 rack travel mm : 6.90 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 410 Tolerance 1/min : + 20 TORQUE CONTROL Rated speed rpm : 1150 rack travel mm : 12.00 Tolerance mm : + 0.05 Rated speed rpm : 650 rack travel mm : 12.00 Tolerance mm : + 0.10 ANEROID/ALTITUDE	Aneroid pressure hPa : 1500 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 208.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance
Rated speed rpm : 300 rack travel mm : 6.90 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 410 Tolerance 1/min : + 20 TORQUE CONTROL Rated speed rpm : 12.00 rack travel mm : 12.00 Tolerance mm : + 0.05 Rated speed rpm : 650 rack travel mm : 12.00 Tolerance mm : + 0.10 ANEROID/ALTITUDE COMPENSATOR TEST	Aneroid pressure hPa : 1500 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 208.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance

Del. quantity cm3/1000 strokes	:	210.0
Tolerance cm3/1000 strokes	: -	- 15.0
Check tolerance cm3/1000s.	: -	⊢ 19.0

LOW IDLE

Rated speed rpm	:	300	
Rack travel in mm Tolerance mm Del. quantity	: +-	6.90 0.10	
cm3/1000 strokes	:	20.0	
Tolerance cm3/1000 strokes	: +	3.0	
Check tolerance cm3/1000s. Spreed	: +-	6.0	
Tolerance cm3/1000 strokes	:	6.0	
Check tolerance cm3/1000s.	:	9.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 20.08.97 Test oil : ISO 4113

Combination No. : 0 402 076 748

Injection pump

Pump designation : PES6P110A720RS3305

: -1

EP type number : 0 412 016 742

Governor

Governer design. : RSV300...1100P1A555

Governer no. : 0 421 833 379

Cust. part No. : 9271058

Customer-spec. information
Customer : LIEBHERR
Motor : D 926 TI
Power KW : 210.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 417 413 049

Inlet press. bar : 1.5
Tolerance bar : +- 0.1

Overflow quantity

min. L/h : 130 Tolerance L/h : + 10.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 207.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.20
Tolerance mm : ← 0.05
Check

tal and

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : + 0.75

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

1000

Rack travel in mm: 11.25 Tolerance mm: + 0.05 Del. quantity cm3/1000 strokes: 165.0 Tolerance cm3/1000 strokes: + 1.0 Check tolerance cm3/1000s. : + 3.5 Spreed	Aneroid pressure hPa : 1300 Del. quantity cm3/1000 strokes : 165.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.5 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000 strokes : 7.5
Tolerance J. cm3/1000 strokes : 4.0	CONTROL LEVER
Check tolerance cm3/1000s. : 7.5	control lever position degree : 108.0 tolerance degree : +- 4.0
Rated speed rpm : 400	RATED SPEED rack travel mm : 10.25 Rated speed rpm : 1040
Rack travel in mm : 4.40 + Tolerance mm : + 0.10 +	Tolerance 1/min : +- 5
Del. quantity cm3/1000 strokes : 36.0 Tolerance	rack travel mm : 4.00 Rated speed rpm : 1095 Tolerance 1/min : +- 15
cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 5.5 Spreed	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1260
Tolerance cm3/1000 strokes : 4.5 Check tolerance cm3/1000s. : 7.5	rack travel mm : 4.00 Rated speed rpm : 1100 Tolerance 1/min : +- 15
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	control lever position degree : 78.0 tolerance degree : +- 4.0
control lever position degree : - 3 Rated speed rpm : 800	Setting point w/out bumper spring
Rack travel in mm: 0.50 Tolerance mm: + 0.20	Rated speed rpm : 400 rack travel mm : 3.90 Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Testing:
Rated speed rpm : 1000	Rated speed rpm : 400 rack travel mm : 4.40 Tolerance mm : +- 0.10

rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 510 : +- 30	
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1000 : 11.25 : ← 0.05	
Rated speed rpm rack travel mm Tolerance mm		
Rated speed rpm rack travel mm Tolerance mm	: 500 : 11.30 : + 0.10	
ANEROID/ALTITUDE COMPENSATOR TEST		
SETTING		
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 550 : 1300 : 14.00 : + 0.05	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 550 : - : 9.75 : +- 0.10	
MEASUREMENT		
Rated speed rpm	: 550	
Pressure hPa rack travel mm Tolerance mm	: 650 : 11.00 : +- 0.05	
Pressure hPa rack travel mm Tolerance mm	: 550 : 10.25 : + 0.10	
FUEL DELIVERY CHARACTERISTICS		
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 1300 : 600 : 186.0	
cm3/1000 strokes	: +- 2.0	

Check tolerance cm3/1000s.	: +- 5.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 550 : 152.5 : + 1.0 : + 3.5
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
LOW IDLE	
Rated speed rpm	: 400
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: +- 0.10

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 20.08.97 Test oil : ISO 4113

Combination No. : 0 402 076 748A

Injection pump

Pump designation : PES6P110A720RS3305

: -1

EP type number : 0 412 016 742

Governor

Governer design. : RSV300...1100P1A555

Governer no. : 0 421 833 379

Cust. part No. : 9271058

Customer-spec. information
Customer : LIEBHERR
Motor : D 926 TI
Power KW : 210.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. $^{\circ}$ C : $^{\prime}$ C Tolerance $^{\circ}$ C : \leftarrow 2.0

Overflow valve : 1 417 413 049

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 130 Tolerance L/h : + 10.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 207.0 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 11.25
Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 165.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.5 Spreed Tolerance cm3/1000 strokes : 4.0	Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.5 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 CONTROL LEVER
Check tolerance cm3/1000s. : 7.5	control lever position degree : 108.0 tolerance degree : + 4.0
Rated speed rpm : 400 Rack travel in mm : 4.40 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 36.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 5.5 Spreed Tolerance cm3/1000 strokes : 4.5 Check tolerance cm3/1000 strokes : 7.5 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	RATED SPEED rack travel mm : 10.25 Rated speed rpm : 1025 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1095 Tolerance 1/min : + 15 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1260 rack travel mm : 4.00 Rated speed rpm : 1100 Tolerance 1/min : + 15
GUIDE SLEEVE POSITION	control lever position degree : 78.0
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20	tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 400 rack travel mm : 3.90 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1300 Del. quantity cm3/1000 strokes : 165.0	Testing: Rated speed rpm : 400 rack travel mm : 4.40 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 510 Tolerance 1/min : +- 30

TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1000 : 11.25 : + 0.05	
Rated speed rpm rack travel mma Tolerance mm	: 600 : 11.25 : + 0.10	
Rated speed rpm rack travel mm Tolerance mm	: 500 : 11.30 : ← 0.10	
ANEROID/ALTITUDE COMPENSATOR TEST		
SETTING		
Rated speed rpm Pressure hPa nack travel mm Tolerance mm	: 550 : 1300 : 14.00 : + 0.05	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 550 : - : 9.75 : + 0.10	
MEASUREMENT		
Rated speed rpm	: 550	
Pressure hPa rack travel mma Tolerance mma	: 650 : 11.00 : ← 0.05	
Pressure hPa rack travel mm Tolerance mm	: 550 : 10.25 : ← 0.10	
FUEL DELIVERY CHARACTERISTICS		
Aneroid pressure hPa Rated speed rpm	: 1300 : 600	
Del. quantity cm3/1000 strokes Tolerance	: 186.0	
cm3/1000 strokes Check tolerance cm3/1000s.	: +- 2.0 : +- 5.0	

Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 550 : 152.5 : + 1.0 : + 3.5	
STARTING FUEL DEL	IVERY	
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.		
LOW IDLE		
Rated speed rpm	: 400	
Rack travel in mmn Tolerance mmn Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: ← 4.40 : ← 0.10 : 36.0 : ← 3.0 : ← 5.5 : 4.5 : 7.5	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 20.08.97 Edition Test oil : ISO 4113

Combination No. : 0 402 076 7488

Injection pump

Pump designation : PES6P110A720RS3305

: -1

EP type number : 0 412 016 742

Governor

Governer design. : RSV300...1100P1A555

Governer no. : 0 421 833 379

Cust. part No. : 9273570

Customer-spec. information : LIEBHERR Customer

: D 926 TI Motor Power KW : 200.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

40 temp. °C : +- 2.0 Toterance *C

Overflow valve : 1 417 413 025

1.5 Inlet press. bar : Tolerance bar : + 0.1

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

mer values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.20 Tolerance mm : ← 0.05

Check

tolerance mm: \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : ← 1.50

Firing order : 1-5- 3- 6- 2-

: 0-60-120-180-240 Phasing

: ~300

Tolerance : **←** 0.50

Check

tolerance *NW : **←** 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 11.35 Tolerance m: \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 179.0

Tolerance

cm3/1000 strokes : +- 1.0

802

Check tolerance cm3/1000s. : + 3.5	Check tolerance cm3/1000s. : 7.5
+	
Tolerance cm3/1000 strokes : 4.0	CONTROL LEVER control lever
Check tolerance cm3/1000s. : 7.5	position degree : 100.0 tolerance degree : +- 4.0
<u> </u>	RATED SPEED rack travel mm : 10.30
Rated speed rpm : 400	Rated speed rom : 925 Tolerance 1/min : +- 5
Rack travel in mm: 4.40	
Tolerance mm : \leftarrow 0.10 $+$	rack travel mm : 4.00
Del. quantity +	Rated speed rpm : 975
cm3/1000 strokes : 13.0 + Tolerance +	Tolerance 1/min : ← 15
cm3/1000 strokes : + 3.0	rack travel mm : 0.85
Check tolerance	Tolerance mm : \leftarrow 0.55
cm3/1000s. : \leftarrow 5.5	Rated speed rpm : 1125
Spreed	
Tolerance	rack travel mm : 4.00
cm3/1000 strokes : 4.5	Rated speed rpm : 995
Check tolerance + cm3/1000s. : 7.5 +	Tolerance 1/min : + 15
cm3/1000s. : 7.5	
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
	control lever
GUIDE SLEEVE POSITION	position degree : 74.0
†	tolerance degree : +- 4.0
control lever position degree : -3	Setting point w/out bumper spring
position degree : -3 + Rated speed rum : 300 +	Rated speed rpm : 400
The second secon	
Rack travel in mm: 0.50	rack travel mm : 3.90 Tolerance mm : + 0.10
Tolerance mm : + 0.20	
	Testing:
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 400
Rated speed rpm : 900 +	rack travel mm : 4.40 Tolerance mm : + 0.10
Aneroid pressure	
hPa : -	rack travel mm : 2.00
Del. quantity	Rated speed rpm : 450
cm3/1000 strokes : 179.0 + Tolerance	Tolerance 1/min : +- 30
cm3/1000 strokes : +- 1.0	
Check tolerance	
	TORQUE CONTROL
cm3/1000s. : +- 3.5	Rated speed rpm : 900
cm3/1000s. : + 3.5 Spreed	Rated speed rpm : 900 rack travel mm : 11.35
cm3/1000s. : +- 3.5	Rated speed rpm : 900

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 550
Pressure hPa : 1300
rack travel mm : 14.00
Tolerance mm : ← 0.05

Rated speed rpm : 550
Pressure hPa : 650
rack travel mm : 10.25
Tolerance mm : + 0.10

MEASUREMENT

Rated speed rpm : 550

Pressure hPa : 640 rack travel mm : 11.00 Tolerance mm : + 0.05

Pressure hPa : 560 rack travel mm : 10.55 Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : Rated speed rpm : 550

Del. quantity

cm3/1000 strokes : 165.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s. : \leftarrow 3.5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity

cm3/1000 strokes : 145.0

Tolerance cm3/1000 strokes : +- 10.0

Check tolerance

cm3/1000s. : \leftarrow 14.0

LOW IDLE

Rated speed rpm : 400 Rack travel in mm: 4.40 Tolerance mm : \leftarrow 0.10 Del. quantity cm3/1000 strokes : 13.0 Tolerance cm3/1000 strokes : \leftarrow 3.0 Check tolerance cm3/1000s. : +- 5.5 Spreed Tolerance cm3/1000 strokes : 4.5 Check tolerance : 7.5 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 20.08.97 Edition Edition : 20.08.97
Test oil : ISO 4113

Combination No. : 0 402 076 7480

Injection pump

Pump designation : PES6P110A720RS3305

: -1 EP type number : 0 412 016 742

Governor

Governer design. : RSV300...1100P1A555

Governer no. : 0 421 833 379

Cust. part No. : 9275362

Customer-spec. information Customer : LIEBHERR Motor : D 926 TI Power KW : 220.0

TEST BENCH REQUIREMENTS

Inlet line : 4.7

Test oil inlet

temp. °C Tolerance °C : ÷- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar $: \leftarrow 0.1$

Overflow quantity

min. l/h : 160
Tolerance l/h : + 10.0

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.20 Tolerance mm : + 0.05 Check

tolerance nm : \leftarrow 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.50

Check

tolerance *NW : + 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 11.85 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 200.0

Tolerance	+ Tolerance + cm3/1000 strokes : 4.0
cm3/1000 strokes : +- 1.0	+ Check tolerance + cm3/1000s. : 7.5
Check tolerance cm3/1000s. : ← 3.5	+
Spreed	CONTROL LEVER
Tolerance cm3/1000 strokes : 4.0	control lever position degree : 109.0 tolerance degree : + 4.0
Check tolerance cm3/1000s. : 7.5	RATED SPEED rack travel mm : 10.85 Rated speed rpm : 925 Tolerance 1/min : + 5
Rack travel in mm : 4.40 Tolerance mm : + C.10 Del. quantity cm3/1000 strokes : 13.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 5.5 Spreed Tolerance cm3/1000 strokes : 4.5 Check tolerance cm3/1000 strokes : 7.5	rack travel mm : 4.00 Rated speed rpm : 975 Tolerance 1/min : + 15 rack travel mm : 0.85 Tolerance mm : + 0.55 Ratec speed rpm : 1125 rack travel mm : 4.00 Rated speed rpm : 995 Tolerance 1/min : + 15
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
	control lever position degree : 78.0
GUIDE SLEEVE POSITION	tolerance degree : +- 4.0
	Setting point w/out bumper spring
control lever position degree : - 3	+ Rated speed rpm : 400
Rated speed rpm : 800	rack travel mm : 3.90 Tolerance mm : + 0.10
Dad Association of Co.	+ Tolerance mm : + 0.10
Rack travel in mm : 0.50 Tolerance mm : + 0.20	Testing:
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 400 rack travel mm : 4.40 Tolerance mm : + 0.10
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 200.0 Tolerance cm3/1000 strokes : +- 1.0	rack travel mm : 2.00 Rated speed rpm : 510 Tolerance 1/min : +- 30
Check tolerance cm3/1000s. : +- 3.5 Spreed	TORQUE CONTROL Rated speed rpm : 900 rack travel mm : 11.85

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm	:	550
Pressure hPa	:	1300
rack travel mm	:	14.00
Tolerance mm	:	+- 0.05

Rated speed rpm	:	550
Pressure hPa	;	-
rack travel mm	:	9.65
Tolerance mm	: +-	0.10

MEASUREMENT

Rated	speed	rpm	:	550
-------	-------	-----	---	-----

Pressure hPa	:		800
rack travel mm	;		11.25
Tolerance mm	:	+-	0.05

Pressure hPa	:	670
rack travel mm	:	10.25
Tolerance mm	: +	- 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid	pressure		
hPa		:	

Del. quantity

cm3/1000 strokes : 145.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s. : +- 3.5

STARTING FUEL DELIVERY

Rated speed rpm rack travel mm	:	100 20.50
Tolerance mm	: +-	- 0.50
Del. quantity cm3/1000 strokes	:	145.0

Tolerance

cm3/1000 strokes : +- 10.0

Check tolerance

cm3/1000s. : +- 14.0

LOW IDLE

	•	4.40 0.10	
Del. quantity cm3/1000 strokes Tolerance	:	13.0	
cm3/1000 strokes Check tolerance	: +-	3.0	
cm3/1000s.	: +-	5.5	
Tolerance cm3/1000 strokes	•	4.5	
Check tolerance cm3/1000s.	:	7.5	
		. •	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 20.08.97 : ISO 4113

Combination No. : 0 402 076 748E

Injection pump

Pump designation : PES6P110A720RS3305

: -1

EP type number : 0 412 016 742

Governor

Governer design. : RSV300...1100P1A555

Governer no.

: 0 421 833 379

Cust. part No. : 9277045

Customer-spec. information : LIEBHERR

Customer

Motor

: D 926 TI

Power KW

: 185.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C

40

Tolerance °C

Overflow valve : 1 417 413 025

Inlet press. bar :

1.5

Tolerance bar $: \leftarrow 0.1$

Overflow quantity

min. l/h : 160 Tolerance l/h : + 10.0

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

: 173.5

Tolerance bar : + 1.5

808

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter :

3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : +- 1.0

Prestroke mm : 3.20 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 10.75

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 162.0

Tolerance cm3/1000 strokes : +- 1.0	Check tolerance cm3/1000s. : +- 3.5 Spreed
Check tolerance cm3/1000S. : +- 3.5	Tolerance cm3/1000 strokes : 4.0 Check tolerance
Spreed	cm3/1000s. : 7.5
Tolerance cm3/1000 strokes : 4.0	CONTROL LEVER
Check tolerance	control lever position degree : 109.0 tolerance degree : +- 4.0
Rated speed rpm : 400	RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1045
Rack travel in mm: 4.40 † Tolerance mm: + 0.10	Tolerance 1/min : +- 5
Del. quantity cm3/1000 strokes : 13.0 Tolerance cm3/1000 strokes : +- 3.0	rack travel mm : 4.00 Rated speed rpm : 1100 Tolerance 1/min : +- 15
Check tolerance + cm3/1000s. : +- 5.5 + Spreed	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1130
Tolerance + d.5 Check tolerance + cm3/1000s. : 7.5	rack travel mm : /.00 Rated speed rpm : 1100 Tolerance 1/min : +- 15
(B) SETTING OF INJECTION PUMP WITH GOVERNOR +	LOW IDLE
GUIDE SLEEVE POSITION +	control lever position degree : 78.0 tolerance degree : +- 4.0
control lever position degree : - 3 Rated speed rpm : 800	Setting point w/out bumper spring
Rack travel in mm : 0.50 + Tolerance mm : + 0.20 +	Rated speed rpm : 400 rack travel mm : 3.90 Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Testing:
Rated speed rpm : 1000 + Aneroid pressure + Aneroid + Aneroid + Aneroid + Aneroid + Aneroid + Aneroid + Aner	Rated speed rpm : 400 rack travel mm : 4.40 Tolerance mm : +- 0.10
Del. quantity cm3/1000 strokes : 162.0 Tolerance cm3/1000 strokes : + 1.0	rack travel mm : 2.00 Rated speed rpm : 450 Tolerance 1/min : +- 30
CIII3/ 1000 SCI ORES . I TO TO	

TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 10.75 Tolerance mm : \leftarrow 0.05 ANEROID/ALTITUDE COMPERSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1300 rack travel mm : 14.00 Tolerance mm : +- 0.05 Rated speed rpm : 500 Pressure hPa : - rack travel mm : 9.00 Tolerance mm : \leftarrow 0.10 MEASUREMENT Rated speed rpm : 500 Pressure hPa : 535 rack travel mm : 10.45 Tolerance mm : +- 0.05 Pressure hPa : rack travel mm : 9.95
Tolerance mm : + 0.10 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 134.0 Tolerance cm3/1000 strokes : +- 1.0Check tolerance cm3/1000s. : +- 3.5 STARTING FUEL DELIVERY Rated speed rpm : 100

Tolerance cm3/1000 strokes : +- 10.0 Check tolerance cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm : 400 Rack travel in mm : 4.40 Tolerance mm : - 0.10 Del. quantity cm3/1000 strokes : 13.0 Tolerance cm3/1000 strokes : +- 3.0Check tolerance cm3/1000s. : +- 5.5 Spreed Tolerance cm3/1000 strokes : 4.5 Check tolerance : 7.5 c.m3/1000s.

End of test specification sheet

Del. quantity

rack travel mm : 20.50
Tolerance mm : + 0.50

cm3/1000 strokes : 145.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 20.08.97 Edition Test oil : ISO 4113

Combination No. : 0 402 076 748G

Injection pump

Pump designation : PES6P110A720RS3305

: -1

EP type number : 0 412 016 742

Governor

Governer design. : RSV300...1100P1A555

: 0 421 833 379 Governer no.

Cust. part No. : 9271056

Customer-spec. information Customer : LIEBHERR Motor : D 926 TI Power KW : 218.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C : +- 2.0 Tolerance °C

Overflow valve : 1 417 413 049

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 130 Tolerance l/h : +- 10.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 207.5 bar Tolerance bar : +- 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : \leftarrow 1.0

Prestroke mm : 3.20 Tolerance mm : +- 0.05 Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50 : +- 1.50 Tolerance mm

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 12.30

Tolerance mm : +- 0.05	+ Check tolerance + cm3/1000s. : + 3.5
Del. quantity cm3/1000 strokes : 181.0	Spreed Tolerance
Talana	
Tolerance cm3/1000 strokes : +- 1.0	+ Check tolerance + cm3/1000s. : 7.5
Check tolerance	
$cm3/1000s$. : \leftarrow 3.5	
Special	. + CONTROL LEVER
Spreed	T control lever
Tolerance	position degree : 100.0
cm3/1000 strokes : 4.0	tolerance degree : + 4.0
	. +
Check tolerance	+ RATED SPEED
cm3/1000s. : 7.5	+ rack travel mm : 10.85 + Rated speed rom : 925
	Tolerance 1/min : +- 5
	Totalite mility . 1 3
Rated speed rpm : 400	rack travel mm : 4.00
	Rated speed rpm : 980
Rack travel in mm : 4.40	+ Tolerance 1/min : +- 15
Tolerance mm : +- 0.10	+
Del. quantity	+ rack travel mm : 4.00
cm3/1000 strokes : 30.0	+ Rated speed rpm : 995
Tolerance	Tolerance 1/min : + 15
cm3/1000 strokes : + 3.0 Check tolerance	†
cm3/1000S. : +- 5.5	
Spreed	
Tolerance	LOW IDLE
cm3/1000 strokes : 4.5	+
Check tolerance	+
cm3/1000s. : 7.5	+ control lever
	+ position degree : 75.0
(D) SETTING OF TABLECTION DUMP	tolerance degree : +- 4.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	+ Setting point w/out bumper spring
WITH GOVERNOR	- Specific points wrote builder spring
	Rated speed rpm : 500
	rack travel mm : 3.90
GUIDE SLEEVE POSITION	Tolerance mm : + 0.10
	†
variable Lauran	† Testing:
control lever	Rated speed rpm : 500
position degree : - 3	
	+ rack travel mm : 4.40 + Tolerance mm : + 0.18
FULL LOAD DELIVERY AT FULL LOAD STOP	1000 41100 11111
Rated speed rpm : 900	+ TORQUE CONTROL
Aneroid pressure	Rated speed rpm : 900
hPa : 1300	rack travel mm : 12.30
Del. quantity cm3/1000 strokes : 181.0	→ Tolerance mm : ← 0.05
Tolerance	Rated speed rpm : 500
cm3/1000 strokes : +- 1.0	
	+ rack travel mm : 12.30 + Tolerance mm : + 0.10
	1

Rated speed rpm	: 700	‡
rack travel mm	: 12.30	1
Tolerance mm	: +- 0.10	+
Rated speed rpm	: 450	1
rack travel mm	: 13.70	I
	: + 0.10	Ť
Tolerance mm	: 0.10	1
		
ANEROID/ALTITUDE		+
COMPENSATOR TEST		İ
		Ţ
SETTING		+
Rated speed rpm	: 550	Ī
Pressure hPa	: 1300	1
rack travel mm	: 14.00	1
Tolerance mm	: ← 0.05	1
		+
Rated speed rpm	: 550	†
Pressure hPa		†
rack travel mm	9.45	+
Tolerance mm	: ← 0.10	1
MEASUREMENT		-
Rated speed rpm	: 550	7
Pressure hPa	: 800	‡
rack travel mm	: 11.80	1
Tolerance mm	: +- 0.05	I
TOCCT GITCC TMM		+
Pressure hPa	: 670	+
rack travel mm	: 10.35	+
Tolerance mm	: ← 0.10	+
		‡
FUEL DELIVERY CHA	LPACTEDISTICS	— <u>†</u>
TOLL VECTVERT CHA	MACIEN 13 / 103	Ŧ
Aneroid pressure		1
hPa	: 1300	I
Rated speed rpm	: 500	1
Del. quantity		1
cm3/1000 strokes	: 203.0	1
Tolerance		1
cm3/1000 strokes	: +- 2.0	+
Check tolerance		+
cm3/1000s.	: +- 5.0	<u>}</u>
		Į
Aneroid pressure	4705	+
hPa	: 1300	+
Rated speed rpm	: 700	+
Del. quantity	404.0	†
cm3/1000 strokes	: 196.0	†
		+

Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: +- 2.0 : +- 5.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 20.50 : +- 0.50 : 145.0
LOW IDLE	
Rated speed rpm	: 400
Del. quantity	: ← 0.10
cm3/1000 strokes Tolerance	: 30.0
cm3/1000 strokes Check tolerance	: +- 3.0
cm3/1000s. Spreed	: +- 5.5
Tolerance cm3/1000 strokes	: 4.5
Check tolerance cm3/1000s.	: 7.5
End of test speci	fication sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 20.08.97 Test oil : ISO 4113

Combination No. : 0 402 076 748H

Injection pump

Pump designation : PES6P110A720RS3305

: -1

EP type number : 0 412 016 742

Governor

Governer design. : RSV300...1100P1A555

Governer no. : 0 421 833 379

Cust. part No. : 9271056

Customer-spec. information
Customer : LIEBHERR

Motor : D 926 TI-E A2

Power KW : 172.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 049

Inlet press. bar : 1.5 Tolerance bar : +- 0.1

Overflow quantity

min. L/h : 130 Tolerance L/h : +- 10.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 207.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

REGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.20 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 10.95

Tolerance mm	: +- 0.05 +	Check tolerance	- -
Del. quantity cm3/1000 strokes	: 161.0	Spreed Tolerance	+- 3.5
- 1		cm3/1000 strokes :	4.0
Tolerance cm3/1000 strokes	: +- 1.0	Check tolerance cm3/1000s. :	7.5
Check tolerance cm3/1000s.	: +- 3.5	CONTROL LEVED	
Spreed	 ‡	CONTROL LEVER	
- 1	+	control lever	
Tulerance cm3/10G0 strokes	: 4.0	position degree : tolerance degree :	98.0 ← 4.0
Check tolerance		RATED SPEED	
cm3/1000s.	: 7.5	rack travel mm :	9.95
	+	Rated speed rpm :	935
	†	Tolerance 1/min :	+- 5
Rated speed rpm	: 400	rack travel mm :	4.00
	+	Rated speed rpm :	975
Rack travel in mm		Tolerance 1/min :	+- 15
	: +- 0.10 †		/ 80
Del. quantity cm3/1000 strokes	: 36.0	rack travel mm : Rated speed rpm :	4.00 985
Tolerance	. 30.0	Tolerance 1/min :	+ 15
cm3/1000 strokes	: +- 3.0		
Check tolarance			
0.110. 100001	: +- 5.5		
Spreed Tolerance	Ī	LOW IDLE	
	: 4.5	LOW IDEC	
Check tolerance	+		
cm3/100US.	: 7.5	control lever	
	†	position degree :	74.0
(B) SETTING OF INJE	FCTION PUMP	tolerance degree :	+- 4.0
WITH GOVERNOR		Setting point w/out	bumper spring
	Į	Rated speed rpm :	400
		rack travel mm : Tolerance mm :	4.40
GUIDE SLEEVE POSIT	ION	Tolerance mm :	+ 0.10
	‡	Testing:	
control lever position degree	3	Pated speed rom .	/.00
position degree	· - 3	Rated speed rpm : rack travel mm :	4.90
		rack travel mm : Tolerance mm :	+- 0.10
FULL LOAD DELIVERY	AT FULL LOAD STOP		·
Rated speed rpm	: 900 +	TORQUE CONTROL	
Aneroid pressure	. 1700	Rated speed rpm :	
hPa Del. quantity	: 1300	rack travel mm : Tolerance mm :	10.95 + 0.05
cm3/1000 strokes	: 161.0 I		
Tolerance	+	Rated speed rpm :	500
cm3/1000 strokes	: 1.0 +	Rated speed rpm : rack travel mm : Tolerance mm :	10.95
	+	iolerance mm :	+- 0.70

Rated speed rpm rack travel mm Tolerance mm	: 700 : 10.95 : +- 0.30
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 550 : 1300 : 14.00 : +- 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 550 : - : 9.90 : +- 0.10
MEASUREMENT	
Rated speed rpm	: 550
Pressure hPa rack travel mm Tolerance mm	: 640 : 10.70 : +- 0.05
Pressure hPa rack travel mm Tolerance mm	: 590 : 10.20 : + 0.10
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1300 : 500
cm3/1000 strokes Tolerance	: 181.0
cm3/1000 strokes Check tolerance	: +- 2.0
cm3/1000s.	: +- 5.0
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1300 : 700
hPa	
hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 700

Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 500 : 159.0 : +- 1.0 : +- 3.5
STARTING FUEL DEL	.IVERY
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 100 : 20.50 : +- 0.50 : 155.0 : +- 10.0 : +- 14.0
LOW IDLE	
Rated speed rpm	: 400
Rack travel in mm Tolerance mm	4.90 : +- 0.10
Del. quantity	
cm3/1000 strokes	: 36.0
cm3/1000 strokes Tolerance cm3/1000 strokes	: 36.0 : +- 3.0
cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	
cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: +- 3.0
cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: +- 3.0 : +- 5.5

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 20.08.97 : ISO 4113 Test oil

Combination No. : 0 402 076 748I

Injection pump

Pump designation : PES6P110A720RS3305

: -1

EP type riumber : 0 412 016 742

Governor

Governer design. : RSV300...1100P1A555

: 0 421 833 379 Governer no.

Cust. part No. : 9271056

Customer-spec, information

Customer : LIEBHERR

: D 926 TI-E A2 Motor

Power KW : 210.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

40 temp. °C Tolerance °C : + 2.0

Overflow valve : 1 417 413 049

Inlet press. bar : 1.5 Tolerance bar : +- 0.1

Overflow quantity

min. l/h : 130 Tolerance l/h : +- 10.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 207.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 3.20 Tolerance mm : +- 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 13.00

B17

Tolerance mm : +- 0.05	+ Check tolerance + cm3/1000s. : +- 3.5
Del. quantity cm3/1000 strokes : 183.0	Spreed Tolerance
Tolerance cm3/1000 strokes : +- 1.0	
Check tolerance cm3/1000s. : + 3.5	
Spreed	+ CONTROL LEVER
Tolerance cm3/1000 strokes : 4.0	control lever position degree : 108.0 tolerance degree : + 4.0
Check tolerance cm3/1000s. : 7.5	RATED SPEED rack travel mm : 12.00 Rated speed rpm · 1030 Tolerance 1/min : +- 5
Rated speed rpm : 400	track travel mm : 4.00 Rated speed rpm : 1100
Rack travel in mm : 4.90 Tolerance mm : + 0.10	Tolerance 1/min : +- 15
Del. quantity cm3/1000 strokes : 36.0 Tolerance	+ rack travel mm : 4.00 + Rated speed rpm : 1100 + Tolerance 1/min : +- 15
cm3/1000 strokes : +- 3.0 Check tolerance	+
cm3/1000s. ; +- 5.5 Spreed	†
Tolerance cm3/1000 strokes : 4.5	+ LOW IDLE
Check tolerance cm3/1000s. : 7.5	control lever position degree : 79.0 tolerance degree : +- 4.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	tolerance degree : +- 4.0 Setting point w/out bumper spring
GUIDE SLEEVE POSITION	Rated speed rpm : 400 rack travel mm : 4.40 Tolerance mm : +- 0.10
	Testing:
control lever position degree : - 3	Rated speed rpm : 400 rack travel mm : 4.90 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	
Rated speed rpm : 1000 Aneroid pressure hPa : 1300 Del. quantity cm3/1000 strokes : 183.0	TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 13.00 Tolerance mm : +- 0.05
Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 500 rack travel mm : 13.00 Tolerance mm : +- 0.10

Rated speed rpm rack travel mm Tolerance mm	: 700 : 13.00 : +- C.30
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 550 : 1300 : 14.00 : ← 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 550 : - : 11.50 : + 0.10
MEASUREMENT	
Rated speed rpm	: 550
Pressure hPa rack travel mm Tolerance mm	: 775 : 12.60 : ← 0.05
Pressure hPa rack travel mm Tolerance mm	: 705 : 11.80 : + 0.10
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1300 : 500 : 203.0 : + 2.0 : + 5.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 1300 : 700 : 194.0 : +- 2.0

Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: : : +- : +-	500 175.0 1.0 3.5	
STARTING FUEL DEL	IVERY		
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.		100 20.50 0.50 155.0 10.0 14.0	
LOW IDLE			
Rated speed rpm	:	400	
Rack travel in mm Tolerance mm Del. quantity	: +-	4.90 0.10	
Tolerance mm Del. quantity cm3/1000 strokes Tolerance	: +-	0.10 36.0	
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: +-	0.10 36.0 3.0	
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: +-	0.10 36.0	
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: +-	0.10 36.0 3.0	
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: +-	0.10 36.0 3.0 5.5	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 20.08.97 : ISO 4113 Test oil

Combination No. : 0 402 076 748K

Injection pump

Pump designation : PES6P110A720RS3305

: -1

EP type number : 0 412 016 742

Governor

Governer design. : RSV300...1100P1A555

Governer no. : 0 421 833 379

Cust. part No. : 9271056

Customer-spec. information

Customer : LIEBHERR

: D 926 TI-E A2 Motor

Power KW : 195.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C : 40 Tolerance *C : +- 2.0

Overflow valve : 1 417 413 049

1.5 Inlet press. bar : Tolerance bar : + 0.1

Overflow quantity

min. l/h : 130 Tolerance l/h : ← 10.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

bar : 207.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

: 3.20 : + 0.05 Prestroke mm Tolerance mm Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : ← 1.50

Firing order : 1-5-3-6-2-: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

: + 0.75 tolerance °NW

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 11.00

B20

Tolerance mm :	+- 0.05 +	Check tolerance
Del. quantity	+	cm3/1000s. : +- 3.5 Spreed
cm3/1000 strokes :	163.0	Tolerance cm3/1000 strokes : 4.0
Tolerance cm3/1000 strokes :	+ 1.0	Check tolerance cm3/1000S. : 7.5
Check tolerance cm3/1000s. :	+ 3.5	
Spreed -		CONTROL LEVER
Tolerance cm3/1000 strokes :	4.0	control lever position degree : 108.0 tolerance degree : +- 4.0
Check tolerance cm3/1000s. :	7.5	RATED SPEED rack travel mm : 10.00 Rated speed rpm : 1025 Tolerance 1/min : + 5
Rated speed rpm :	400	rack travel mm : 4.00 Rated speed rpm : 1990
Rack travel in mm : Tolerance mm :		Tolerance 1/min : + 15
Del. quantity cm3/1000 strokes :	36.0	rack travel mm : 4.00 Rated speed rpm : 1100
Tolerance	+	Tolerance 1/min : + 15
cm3/1000 strokes : Check tolerance	+- 3.0	
cm3/1000s. :	+- 5.5	
Spreed Tolerance	‡	LOW IDLE
cm3/1000 strokes : Check tolerance	4.5	
cm3/1000s. :	7.5	control lever position degree : 79.0
(B) SETTING OF INJECTION WITH GOVERNOR	CTION PUMP	tolerance degree : +- 4.0 Setting point w/out bumper spring
		Rated speed rpm : 400 rack travel mm : 4.40
GUIDE SLEEVE POSITIO	ON TO THE PROPERTY OF THE PROP	rack travel mm : 4.40 Tolerance mm : + 0.10
	Ŧ	Testing:
control lever position degree :	- 3	Rated speed rpm : 400 rack travel mm : 4.90
FULL LOAD DELIVERY A	AT FULL LOAD STOP	Tolerance mm : +- 0.10
Rated speed rpm : Aneroid pressure	1000	TORQUE CONTROL Rated speed rpm : 1000
hPa :	1300	rack travel mm : 11.00 Tolerance mm : + 0.05
Del. quantity cm3/1000 strokes :	163.0	
Tolerance cm3/1000 strokes :	+- 1.0	Rated speed rpm : 500 rack travel mm : 11.00 Tolerance mm : +- 0.10

Rated speed rpm rack travel mm Tolerance mm	: 700 : 11.00 : + 0.30
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1300 : 14.00 : +- 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 10.00 : + 0.10
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 630 : 10.80 : ← 0.05
Pressure hPa rack travel mm Tolerance mm	: 590 : 10.30 : +- 0.10
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1300 : 500
cm3/1000 strokes Tolerance	: 188.0
cm3/1000 strokes Check tolerance cm3/1000s.	: +- 2.0 : +- 5.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1300 : 700 : 178.0
Tolerance cm3/1000 strokes	: +- 2.0
Check tolerance cm3/1000s.	: +- 5.0

Aneroid pressure hPa	:
Rated speed rpm Del. quantity	: 500
cm3/1000 strokes	: 167.0
Tolerance cm3/1000 strokes	: +- 1.0
Check tolerance cm3/1000s.	: + 3.5
STARTING FUEL DEL	 LVERY
Rated speed rpm	: 100
rack travel mm Tolerance mm	: 20.50 : +- 0.50
Del. quantity cm3/1000 strokes	_
Tolerance	
cm3/1000 strokes Check tolerance	
cm3/1000s.	: +- 14.0
LOW IDLE	
Rated speed rpm	: 400
Rack travel in mm	: 4.90
Tolerance mm Del. quantity	: + 0.10
cm3/1000 strokes Tolerance	: 36.0
cm3/1000 strokes Check tolerance	: +- 3.0
cm3/1000S.	: +- 5.5
Spreed Tolerance	. / 5
	, / E

cm3/1000 strokes : 4.5

: 7.5

Check tolerance cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 20.08.97 : ISO 4113

Combination No. : 0 4€ 076 748L

Injection pump

Pump designation : PES6P110A720RS3305

: -i

EP type number : 0 412 016 742

Governor

Governer design. : RSV300...1100P1A555

Governer no.

: 0 421 833 379

Cust. part No. : 9271056

Customer-spec. information

Customer

: LIEBHERR

Motor

: U 920 rI-E A2

Power KW : 210.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve : 1 417 413 049

inlet press. bar : 1.5
Tolerance bar : +- 0.1

Overflow quantity

min. l/h : 130 Tolerance l/h : +- 10.0

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar : 207.5 Tolerance bar : + 1.5

B23

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : + 1.0

Prestroke mm : 3.20 Tolerance nim : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50

Tolerance mm : - 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 13.00

Tolerance mm : +- 0.05

Del. quantity +	Tolerance
cm3/1000 strokes : 186.0	cm3/1000 strokes : 4.0 Check tolerance
Tolerance cm3/1000 strokes : +- 1.0	cm3/1000s. : 7.5
Check tolerance cm3/1000s. : +- 3.5	CONTROL LEVER
Spreed	control lever
Tolerance cm3/1000 strokes : 4.0	position degree : 103.0 tolerance degree : +- 4.0
Check tolerance cm3/1000s. : 7.5	RATED SPEED rack travel mm : 12.00 Rated speed rpm : 940 Tolerance 1/min : +- 5
Rated speed rpm : 450	rack snavel mm : 4.00 Rated speed rpm : 1000
Rack travel in mm : 5.00 Tolerance mm : + 0.10 Del. quantity	rack travel mm : 4.00 Rated speed rpm : 1025 Tolerance 1/min : +- 15
cm3/1000 strokes : 30.0 Tolerance cm3/1000 strokes : + 3.0	
Check tolerance cm3/1000s. : +- 5.5 + Spreed	LOW IDLE
Tolerance cm3/1000 strokes : 4.5 Check tolerance cm3/1000s. : 7.5	<pre>control lever position degree : 80.0 tolerance degree : +- 4.0</pre>
	Setting point w/out bumper spring
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 450 rack travel mm : 3.30 Tolerance mm : +- 0.10
GUIDE SLEEVE POSITION	Testing:
control lever position degree : - 3	Rated speed rpm : 450 rack travel mm : 5.00 Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	TORQUE CONTROL
Rated speed rpm : 900 Aneroid pressure	Rated speed rpm : 900 rack travel mm : 13.00 Tolerance mm : + 0.05
hPa : 1300 Del. quantity cm3/1000 strokes : 186.0 Tolerance	Rated speed rpm : 500 rack travel mm : 13.00 Tolerance mm : +- 0.10
cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.5	Rated speed rpm : 700 rack travel mm : 13.00
Spreed	Tolerance mm : + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa : 1300 rack travel mm : 14.00 : +- 0.10 Tolerance mm

500 Rated speed rpm Pressure hPa rack travel mm : 11.20 : +- 0.10 Tolerance mm

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 800 rack travel mm : 12.70 : + 0.05 Tolerance mm

Pressure hPa : 675 rack travel mm : 11.80 Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

1300 hPa Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 210.0 Tolerance cm3/1000 strokes : +- 2.0Check tolerance cm3/1000s. : ← 5.0

Aneroid pressure

cm3/1000s.

hPa 550 Rated speed rpm : Del. quantity cm3/1000 strokes: 165.0 Tolerance cm3/1000 strokes : +- 1.0Check tolerance : + 3.5

STARTING FUEL DELIVERY

Rated speed rpm	:		100
rack travel mm	:		20.50
Tolerance mm	:	+-	0.50
Del. quantity			
cm3/1000 strokes	:		155.0
Tolerance			
cm3/1000 strokes	:	+-	10.0
Check tolerance			
cm3/1000S.	:	+-	14.0

LOW IDLE

Rated speed rpm : 450

Rack travel in mm : 5.00 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 30.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. 5.5 Spreed Tolerance cm3/1000 strokes : 4.5 Check tolerance cm3/1000s. 7.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 18.08.97 : ISO 4113

Combination No. : 0 402 076 802

Injection numb

Pump designation : PES6P12OA1320/5RS337

EP type number : 0 412 026 794

Governor

Governer design. : RSV350...1050P8A643

Governer no. : 0 421 833 555

Cust. part No. : 1385930

Customer-spec. information

Customer : SCANIA

Motor

: DSI1171A,-C1156A

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration

damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar :

Tolerance bar : +- 0.1

Test nozzle holde

assembly

: 1 688 901 104

Opening pressure

: 251.5

Tolerance bar : +- 1.5

B26

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

2.0

x length mm : 600

REMARKS

(A) INJECTION FUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke nm : 4.45
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50

Tolerance mm : \leftarrow 1.50

Firing order : 1-5- 3- 6- 2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.50

Check

tolerance °NW : **←** 0.75

Start of delivery mark

Tolerance

: +- 0.30

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

+	
Rack travel in mm: 15.35 Tolerance mm: + 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 226.0	Rated speed rpm : 700 Aneroid pressure hPa : 1500
Tolerance cm3/1000 strokes : + 1.0	Del. quantity cm3/1000 strokes : 226.0 Tolerance
Check tolerance	cm3/1000 strokes : + 1.0 Check tolerance
cm3/1000s. : + 7.0	cm3/1000s. : + 7.0 Spreed
Spreed	Tolerance cm3/1000 strokes : 8.0
Tolerance cm3/1000 strokes : 8.0	Check tolerance cm3/1000S. : 12.0
Check tolerance cm3/1000s. : 12.0	
	CONTROL LEVER
1	control lever
Rated speed rpm : 350	
Rated speed rpm : 350	position degree : 54.0
_ +	tolerance degree : +- 4.0
Rack travel in mm: 5.10 +	
Tolerance mm : + 0.10	control lever
The state of the s	
Del. quantity	
cm3/1000 strokes : 18.0 +	tolerance degree : +- 4.0
Tolerance +	
cm3/1000 strokes : + 3.0	RATED SPEED
Check tolerance +	rack travel mm : 14.30
cm3/1000s. : + 6.0 +	Rated speed rpm : 1095
Spreed	Tolerance 1/min : + 5
Tolerance	Check
	speed 1/min : + 10
Check tolerance +	
cm3/1000s. : 8.0 +	rack travel mm : 4.00
1	Rated speed rpm : 1195
1	Tolerance 1/min : + 15
(D) CETTAIC OF TABLECTION DUMO	
(B) SETTING OF INJECTION PUMP	Check
WITH GOVERNOR +	speed 1/min : +- 20
+	
+	rack travel mm : 0.85
	Tolerance mm : +- 0.55
GUIDE SLEEVE POSITION	Rated speed rpm : 1350
GOIDE SEELVE FOSTITON	Nated Speed (pill : 1990
Ţ	4.00
+	rack travel mm : 4.00
control lever +	Rated speed rpm : 1215
position degree : - 3	Tolerance 1/min : + 15
Rated speed rpm : 800	Check
Tarea speed (pill + 000	
1	speed 1/min : +- 20
Rack travel in mm: 0.50	
Tolerance mm : $+$ 0.20	
1	
dovernor enring	
governor spring +	
pre-tension +	LOW IDLE
click setting x : 6.00	
-	

control lever position degree tolerance degree	: 73.0 : +- 4.0
control lever position degree tolerance degree	: 23.0 : + 4.0
Setting point w/o	out bumper spring
Rated speed rpm rack travel mm Tolerance mm	: 350 : 4.60 : +- 0.10
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 350 . 5 10 : +- 0.10
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 555 : +- 30
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm rack travel mm Tolerance mm	: 1050 : 15.35 : +- 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 15.35 : ← 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 12.10 : + 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 510 : 13.10 : +- 0.20

Pressure hPa rack travel mm Tolerance mm	: 780 : 14.50 : +- 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 500 : 150.0 : + 1.0 : + 4.0
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 100 : 12.10 : + 0.20 : 165.0 : + 20.0 : + 24.0
LOW IDLE	
Rated speed rpm	: 350
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 5.10 : + 0.10 : 18.0 : + 3.0 : + 6.0

Tolerance

cm3/1000 strokes : 4.0

Check tolerance cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 18,08,97 : ISO 4113 Test oil

Combination No. : 0 402 646 627

Injection pump

Pump designation : PE6P120A320RS7297

: -10

EP type number : 0 412 626 921

Governor

Governer design. : RQV350...1100PA795

: -12

: 0 421 813 914 Governer no.

Cust. part No. : 1340653

Customer-spec. information Customer : SCANIA : DSC 909 Motor

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration

damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 210 Tolerance L/h : + 20.0

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

: 251.5 bar

Tolerance bar : +- 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

: 5.25 : + 0.05 Prestroke mm Tolerance mm

Check

: ← 0.10 tolerance mm

Rack travel in mm : 13.00Tolerance mm : $\leftarrow 0.50$

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

: **←** 0.50 Tolerance

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

BASIC SETTING

Del. quantity

cm3/1000 strokes : 205.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s. : + 4.0

Spreed	
Tolerance cm3/1000 strokes : 8.0	CONTROL LEVER
	control lever
Check tolerance cm3/1000s. : 12.0	position degree : 47.0 tolerance degree : +- 4.0
	control lever
Rated speed rpm : 250	<pre>position degree : 106.0 tolerance degree : +- 4.0</pre>
, , , , , , , , , , , , , , , , , , , ,	+
Rack travel in mon: 4.90 Tolerance mmn : +- 0.10	+ RATED SPEED + rack travel mm : 12.20
Del. quantity	+ rack travel mm : 12.20 + Rated speed rpm : 1145
cm3/1000 strokes : 26.0	+ Tolerance 1/min : + 5
Tolerance	+ Check
<pre>cm3/1000 strokes : +- 3.0 Check tolerance</pre>	speed 1/min : + 10
cm3/1000s. : \leftarrow 6.0	+ rack travel mm : 4.00
Spreed	Rated speed rpm : 1270 Tolerance 1/min : +- 15
Tolerance cm3/1000 strokes : 4.0	+ Tolerance 1/min : + 15 + Check
Check tolerance	speed 1/min : + 20
cm3/1000s. : 8.0	+
	+ rack travel mm : 0.50
(B) SETTING OF INJECTION PUMP	+ Tolerance mm : +- 0.50 + Rated speed rpm : 1400
WITH GOVERNOR	+ Nated Speed (piii . 1400
	<u> </u>
	ı
GUIDE SLEEVE POSITION	LOW IDLE
GUIDE SLEEVE POSITION	LOW IDLE
	‡
GUIDE SLEEVE POSITION control lever position degree : - 1	LOW IDLE control lever position degree : 68.0
control lever	control lever
control lever position degree : - 1 Rated speed rpm : 1300	control lever position degree : 68.0 tolerance degree : + 4.0
control lever position degree : - 1	control lever position degree : 68.0 tolerance degree : + 4.0 control lever
control lever position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 12.00	control lever position degree : 68.0 tolerance degree : + 4.0 control lever
control lever position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 12.00	control lever position degree : 68.0 tolerance degree : + 4.0 control lever position degree : 11.0 tolerance degree : + 4.0
control lever position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 12.00 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700	control lever position degree : 68.0 tolerance degree : + 4.0 control lever position degree : 11.0 tolerance degree : + 4.0
control lever position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 12.00 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure	control lever position degree : 68.0 tolerance degree : + 4.0 control lever position degree : 11.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 150
control lever position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 12.00 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : -	control lever position degree : 68.0 tolerance degree : + 4.0 control lever position degree : 11.0 tolerance degree : + 4.0 Setting point w/out bumper spring
control lever position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 12.00 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity	control lever position degree : 68.0 tolerance degree : + 4.0 control lever position degree : 11.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 150 CRT mm min. :> 6.40
control lever position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 12.00 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 205.0 Tolerance	control lever position degree : 68.0 tolerance degree : + 4.0 control lever position degree : 11.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 150 CRT mm min. :> 6.40 Testing:
control lever position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 12.00 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 205.0 Tolerance cm3/1000 strokes : + 1.0	control lever position degree : 68.0 tolerance degree : +- 4.0 control lever position degree : 11.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 150 CRT mm min. :> 6.40 Testing: Rated speed rpm : 250
control lever position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 12.00 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 205.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	control lever position degree : 68.0 tolerance degree : + 4.0 control lever position degree : 11.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 150 CRT mm min. :> 6.40 Testing: Rated speed rpm : 250 rack travel mm : 4.90
control lever position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 12.00 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 205.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0	control lever position degree : 68.0 tolerance degree : + 4.0 control lever position degree : 11.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 150 CRT mm min. :> 6.40 Testing: Rated speed rpm : 250
control lever position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 12.00 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 205.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	control lever position degree : 68.0 tolerance degree : + 4.0 control lever position degree : 11.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 150 CRT mm min. :> 6.40 Testing: Rated speed rpm : 250 rack travel mm : 4.90
control lever position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 12.00 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 205.0 Tolerance cm3/1000strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0	control lever position degree : 68.0 tolerance degree : + 4.0 control lever position degree : 11.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 150 CRT mm min. :> 6.40 Testing: Rated speed rpm : 250 rack travel mm : 4.90 Tolerance mm : + 0.10
control lever position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 12.00 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : Del. quantity cm3/1000 strokes : 205.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance	control lever position degree : 68.0 tolerance degree : + 4.0 control lever position degree : 11.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 150 CRT mm min. :> 6.40 Testing: Rated speed rpm : 250 rack travel mm : 4.90 Tolerance mm : + 0.10

Rated speed rpm	: 1100
rack travel mm	: 13.25
Tolerance mm	: +- 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm	: 500
Pressure hPa	: 1500
rack travel mm	: 13.25
Tolerance mm	: + 0.05
Rated speed rpm	: 500
Pressure hPa	: -
rack trayel mm	: 11.00
Tolerance mm	: + 0.20

MEASUREMENT

Rated speed rpm	: 500	
Pressure hPa rack travel mm Tolerance mm	: 470 : 11.80 : ← 0.15	
Pressure hPa rack travel mm Tolerance mm	: 670 : 12.85 : + 0.05	

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure		
hPa	:	_
Rated speed rpm	:	1100
Del. quantity		
cm3/1000 strokes		183.0
Tolerance		
cm3/1000 strokes	:	+- 4.0
Check tolerance		
cm3/1000s.	:	← 6.0

:		-
:		500
:		170.0
:	+-	1.0
:	+-	4.0
	Ť	: +-

STARTING FUEL DELIVERY

Rated speed rpm	: 100
rack travel mm	: 20.50
Tolerance mm	: ← 0.50
Del. quantity	
cm3/1000 strokes	: 265.0
Tolerance	
cm3/1000 strokes	: ← 20.0
Check tolerance	
cm3/1000S.	: ← 24.0

LOW IDLE

Rated speed rpm	•	250
Rack travel in mm Tolerance mm Del. quantity	-	4.90 0.10
cm3/1000 strokes	:	26.0
cm3/1000 strokes Check tolerance	: +-	3.0
cm3/1000s. Spreed Tolerance	: +-	6.0
7.4000	:	4.0
cm3/1000s.	:	8.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 19.08.97 Test oil : ISO 4113

Combination No. : 0 402 646 836

Injection pump

Pump designation : PE6P12OA72ORS7126

: -10

EP type number : 0 412 626 926

Governor

Governer design. : RQV200...1000PA725

: -1

Governer no. : 0 421 813 552

Cust. part No. : 1107958

Customer-spec. information
Customer : SCANIA
Motor : DSC11 18

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. $^{\circ}$ C : 40 Tolerance $^{\circ}$ C : \div 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 019

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Tolerance bar : 26.0 tolerance bar : +- 1.0

Prestroke mm : 5.05 Tolerance inm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Start of delivery mark

Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

CO5

Rack travel in mm: 14.15 Tolerance mm: + 0.05 Del. quantity cm3/1000 strokes: 235.0 Tolerance cm3/1000 strokes: + 1.0 Check tolerance cm3/1000s: + 4.0 Spreed	Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 235.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 9.0
Tolerance cm3/1000 strokes : 6.0	- CONTROL LEVER
Check tolerance cm3/1000s. : 9.0	control lever position degree : 118.0 tolerance degree : +- 4.0
Rated speed rpm : 225	- control lever - position degree : 63.0 - tolerance degree : +- 4.0
Rack travel in mm : 4.60 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 17.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000 strokes : 6.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	RATED SPEED rack travel mm : 13.10 Rated speed rpm : 1045 Tolerance 1/min : +- 5 Check speed 1/min : +- 10 rack travel mm : 4.00 Rated speed rpm : 1160 Tolerance 1/min : +- 15 Check speed 1/min : +- 20 rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1300
GUIDE SLEEVE POSITION	LOW IDLE
control lever position degree : - 1 Rated speed rpm : 1040 Rack travel in mm : 16.50 Tolerance mm : +- 1.30	control lever position degree : 11.0 tolerance degree : + 4.0 control lever position degree : 65.0
FULL LOAD DELIVERY AT FULL LOAD STOP	tolerance degree : +- 4.0
Rated speed rpm : 700	Setting point w/out bumper spring Rated speed rpm : 100

		+	Del. quantity	
CRT mm min.	: > 6.10	+	cm3/1000 strokes Tolerance	: 227.0
Testing:		1	cm3/1000 strokes Check tolerance	
Rated speed rpm rack travel mm Tolerance mm	: 4.60	+++++++++++++++++++++++++++++++++++++++	cm3/1000s.	: +- 6.0
rack travel mm	: 2.00	†	Aneroid pressure hPa	: -
Rated speed rpm Tolerance 1/min	: 370	+	Rated speed rpm Del. quantity	
		‡	cm3/1000 strokes Tolerance	
TORQUE CONTROL Rated speed rpm	: 700	1	cm3/1000 strokes Check tolerance	
rack travel mm Tolerance mm	: 14.15	<u> </u>	cm3/1000s.	: + 4.0
Rated speed rpm rack travel mm	: 1000	Ī	STARTING FUEL DEL	TVEDY
Tolerance mm	: + 0.10	Ŧ		
			Rated speed rpm	: 100
ANEROID/ALTITUDE		Ţ	rack travel mm Tolerance mm	: + 0.50
COMPENSATOR TEST		+	Del. quantity cm3/1000 strokes	
SETTING		†	Tolerance cm3/1000 strokes Check tolerance	
Rated speed rpm Pressure hPa rack travel mm	: 15 00	+	cm3/1000s.	
Tolerance mm	: +- 0.05	+		
Rated speed rpm Pressure hPa	: 500	Ī	LOW IDLE	
rack travel mm Tolerance mm	10.70	Ī	Rated speed rpm	: 225
MEASUREMENT		+	Rack travel in mm Tolerance mm	4.60 : +- 0.10
Rated speed rpm	: 500	Ţ	Del. quantity cm3/1000 strokes	: 17.0
Pressure hPa	: 250	‡	Tolerance cm3/1000 strokes	: +- 2.0
rack travel mm Tolerance mm	: 11.20 : + 0.20	‡	Check tolerance cm3/1000S. Spreed	: +- 4.0
Pressure hPa	: 510	+	Tolerance	7.0
rack travel mm Tolerance mm	: 13.05 : + 0.05	‡	cm3/1000 strokes Check tolerance	: 3.0
Total diversimin		+	cm3/1000s.	: 6.0
FUEL DELIVERY CHA	ARACTERISTICS	<u>_</u>		
Aneroid pressure		†	End of test speci	ification sheet
hPa Rated speed rpm	: - : 1000	‡		
Mateu speed (bill	. 1000	Т		

CO7

Note remarks

Refer to Service Info for test and adiustment instructions. See microcard(s) W400/...

: 19.08.97 Edition Test oil : ISO 4113

Combination No. : 0 402 646 880

Injection pump

Pump designation : PE6P12OA72ORS7126

: -10

EP type number : 0 412 626 929

Governor

Governer design. : RQV200...1050PA725

: -5

: 0 421 813 814 Governer no.

Cust. part No. : 1120969

Customer-spec. information Customer : SCANIA Motor : DS 11

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5
Tolerance bar : +- 0.1

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5 Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.05 : + 0.05 Tolerance mm Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : ← 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 14.15 Tolerance mm : + 0.05	hPa : 900 Del. quantity cm3/1000 strokes : 235.0
Del. quantity cm3/1000 strokes : 235.0	Tolerance : 233.0 Tolerance : + 1.0 Check tolerance
Tolerance cm3/1000 strokes : + 1.0	cm3/1000s. : +- 4.0 Spreed Tolerance
Check tolerance cm3/1000s. : +- 4.0	- cm3/1000 strokes : 6.0 - Check tolerance - cm3/1000s. : 9.0
Spreed -	‡
Tolerance - cm3/1000 strokes : 6.0 -	CONTROL LEVER
Check tolerance cm3/1000s. : 9.0	control lever position degree : 62.0 tolerance degree : + 4.0
Rated speed rpm : 225 - Rack travel in mm : 4.60 -	control lever position degree : 117.0 tolerance degree : + 4.0
Tolerance mm : + 0.30 Del. quantity	RATED SPEED rack travel mm : 13.10 Rated speed rpm : 1095 Tolerance 1/min : +- 5 Check speed 1/min : +- 10
Spreed Tolerance 3.0 Check tolerance cm3/1000s. : 6.0	rack travel mm : 4.00 Rated speed rpm : 1215 Tolerance 1/min : + 15 Check speed 1/min : + 20
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1320
GUIDE SLEEVE POSITION	LOW IDLE
control lever position degree : - 1 Rated speed rpm : 1200	control lever position degree : 64.0 tolerance degree : + 4.0
Rack travel in mm : 10.50 Tolerance mm : +- 2.50	control lever position degree : 10.0 tolerance degree : +- 4.0
FULL LOAD DELIVERY AT FULL LOAD STOP	Setting point w/out bumper spring
Rated speed rpm : 700	Rated speed rpm : 100

+ Aneroid pressure

		† Tolerance
CRT mm min.	: > 6.10	cm3/1000 strokes : +- 4.0 Check tolerance
Testing:		cm3/1000s. : +- 6.0
Rated speed rpm	: 225	Ī
rack travel mm Tolerance mm	: 4.60	+ Aneroid pressure
Tolerance mm	: +- 0.30	+ hPa : -
	700	Rated speed rpm : 500
Rated speed rpm	: 300	+ Del. quantity
		cm3/1000 strokes : 152.0
TORQUE CONTROL		Tolerance : +- 2.0
Rated speed rpm	. 700	
rack travel mm	. 16. 15	Check tolerance cm3/1000s. : +- 4.0
Tolerance mm		I (11137 10003)
TOTAL MAIN		1
Rated speed rpm	: 1050	
rack travel mm	: 14.15	+ STARTING FUEL DELIVERY
Tolerance mm		+
		Rated speed rpm : 100
		+ rack travel mm : 20.50
ANEROID/ALTITUDE		+ Tolerance mm : + 0.50
COMPENSATOR TEST		+ Del. quantity
		cm3/1000 strokes : 300.0
		+ Tolerance
SETTING		+ cm3/1000 strokes : +- 20.0
		+ Check tolerance
Rated speed rpm		+ cm3/1000s. : +- 24.0
Pressure hPa	: 900	†
rack travel mm Tolerance mm	14.75	†
loterance mm	: +- 0.05	†
Rated speed rpm	: 500	+ LOW IDLE
Pressure hPa	: -	-
rack travel mm	: 10.70	Rated speed rpm : 225
Tolerance mm		+
		+ Rack travel in mm : 4.60
MEASUREMENT		+ Tolerance mm : + 0.30
		+ Del. quantity
Rated speed rpm	: 500	+ cm3/1000 strokes : 17.0
		+ Tolerance
Pressure hPa	: 510	+ cm3/1000 strokes : + 2.0
rack travel mm	: 13.05	+ Check tolerance
Tolerance mm	: +- 0.05	+ cm3/1000s. : +- 4.0
D	. 250	+ Spreed
Pressure hPa		Tolerance
rack travel mm		+ cm3/1000 strokes : 3.0
Tolerance mm	: +- 0.20	+ Check tolerance
		$\frac{1}{1}$ cm3/1000s. : 6.0
		I
FUEL DELIVERY CHA	RACTERISTICS	<u></u>
		Find of took on additional to the state of t
Aneroid pressure	: 900	End of test specification sheet
hPa		T
Rated speed rpm		
	: 1050	
Del. quantity cm3/1000 strokes		<u> </u>

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 19.08.97 : ISO 4113 Test oil

Combination No. : 0 402 646 885

Injection pump

Pump designation : PE6P12DA72ORS7126

: -10

EP type number : 0 412 626 929

Governor

Governer design. : RQV350...1050PA795

: -9

Governer no. : 0 421 813 769

Cust. part No. : 1305080

Customer-spec. information Customer : SCANIA

: DS11 54,57 Motor

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration

damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C : +- 2.0 Tolerance °C

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter :

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

: 5.05 : +- 0.05 Prestroke mm

Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerarice : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 14.15 Tolerance mm : +- 0.05

1	Tolerance
Del. quantity	cm3/1000 strokes : +- 1.0
cm3/1000 strokes : 235.0	Check tolerance cm3/1000s. : +- 4.0
Tolerance	Spreed
cm3/1000 strokes : \leftarrow 1.0	Tolerance cm3/1000 strokes : 6.0
Check tolerance	Check tolerance
cm3/1000s. $: \leftarrow 4.0$	cm3/1000s. : 9.0
Spreed	
Tolerance	CONTROL LEVER
cm3/1000 strokes : 6.0	nauhuni lawan
Check tolerance	control lever position degree : 54.0
cm3/1000s. : 9.0	tolerance degree : +- 4.0
	control lever
<u> </u>	position degree : 102.0
Rated speed rpm : 350	tolerance degree : +- 4.0
Rack travel in mm : 4.40	RATED SPEED
Tolerance mm : + 0.30	rack travel mm : 13.10
Del. quantity	Rated speed rom : 1095
cm3/1000 strokes : 17.0	Tolerance 1/min : +- 5
Tolerance +	Check
cm3/1000 strokes : + 2.0 +	speed 1/min : +- 10
Check tolerance	
cm3/1000s. : +- 4.0	rack travel mm : 4.00
Spreed + Tolerance +	Rated speed rpm : 1240 Tolerance 1/min : +- 15
cm3/1000 strokes : 3.0	Check
Check tolerance	speed 1/min : +- 20
cm3/1000s. : 6.0	Speed William
+	rack travel mm : 0.50
+	Tolerance mm : + 0.50
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1350
‡	
GUIDE SLEEVE POSITION	LOW IDLE
‡	
control lever	control lever
position degree : - 1	position degree : 72.0
Rated speed rpm : 1230	tolerance degree : +- 4.0
Rack travel in mm : 16.50	control lever
Tolerance mm : + 1.30	position degree : 23.0
+	tolerance degree : +- 4.0
FULL LOAD DELIVERY AT FULL LOAD STOP	Setting point w/out bumper spring
Pated aread non : 700	Poted aread pro : 100
Rated speed rpm : 700 + Aneroid pressure	Rated speed rpm : 100
hPa : -	CRT mm min. : > 10.00
Del. quantity + cm3/1000 strokes : 235.0 +	Testing:

Rated speed rpm rack travel mm Tolerance mm Rated speed rpm	: 4.40 : +- 0.30
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 14.15 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 14.15 : + 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 900 : 14.15 : + 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 10.70 : + 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 510 : 13.05 : + 0.05
Pressure hPa rack travel mm Tolerance mm	: 250 : 11.20 : + 0.20
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: - : 1000 : 227.0
cm3/1000 strokes Check tolerance cm3/1000s.	: +- 4.0 : +- 6.0

Aneroid pressure hPa Rated speed rpm	:		- 500	-
Del. quantity cm3/1000 strokes	:		152.0	
Tolerance cm3/1000 strokes Check tolerance	:	+-	2.0	
cm3/1000s.	:	+	4.0	
CTARTING FUEL ACT				
STARTING FUEL DEL	TAF	RY		
Rated speed rpm rack travel mm Tolerance mm.	:	+-	100 20.50 0.50	
Del. quantity cm3/1000 strokes	:		300.0	
Tolerance cm3/1000 strokes	:	+	20.0	
Check tolerance cm3/1000s.	:	+	24.0	
LOW IDLE				
Rated speed rpm	:		350	
Rack travel in mm Tolerance mm Del. quantity	:	+	4.40 0.30	
cm3/1000 strokes Tolerance	:		17.0	
cm3/1000 strokes Check tolerance	:	+-	2.0	
cm3/1000s. Spreed Tolerance	:	+-	4.0	
cm3/1000 strokes Check tolerance	:		3.0	
cm3/1000s.	:		6.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 19.08.97 : ISO 4113

Combination No. : 0 402 646 904

Injection pump

Pump designation : PE6P120A720RS7126

: -10

EP type number : 0 412 626 929

Governor

Governer design. : RQV300...900PA795

: -10

Governer no.

: 0 421 813 846

Cust. part No. : 1305081

Customer-spec. information Customer : SCANIA

Motor

: DS11

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration

damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde : 1 688 901 019

Opening pressure

bar

: 208.5

Tolerance bar : +- 1.5

x inside diameter : 3.0
x length mm : 600

Test lines : 1 680 750 015

Outside diameter : 6.0

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +- 1.0

: 5.05 : + 0.05 Prestroke mm

Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 14.15

Tolerance mm : +- 0.05

	+ Tolerance
Del. quantity	- cm3/1000 strokes : +- 1.0
cm3/1000 strokes : 235.0	- Check tolerance
	+ cm3/1000s. : $+- 4.0$
Tolerance cm3/1000 strokes : +- 1.0	+ Spreed
cm3/1000 strokes : +- 1.0	+ Tolerance + cm3/1000 strokes : 6.0
Check tolerance	Check tolerance
cm3/1000s. : +- 4.0	+ cm3/1000s. : 9.0
	+
Spreed	†
Tolerance	CONTROL LEVER
cm3/1000 strokes : 6.0	+
	control lever
Check tolerance	position degree : 50.0
cm3/1000s. : 9.0	tolerance degree : +- 4.0
Age of the party o	T control lever
	+ position degree : 108.0
Rated speed rpm : 300	tolerance degree : +- 4.0
D at Ass. at 25 at 27 (50	T DATES COLES
Rack travel in mm : 4.50 Tolerance mm : + 0.10	+ RATED SPEED + rack travel mm : 13.10
	· · · · · · · · · · · · · · · · · · ·
Del. quantity cm3/1000 strokes : 17.0	† Rated speed rpm : 945 † Tolerance 1/min : +- 5
Tolerance	+ Check
cm3/1000 strokes : +- 2.0	speed 1/min : +- 10
Check tolerance	
$c_{m,3}/1000s.$: +- 4.0	† rack travel mm : 4.00
Spreed	+ Rated speed rpm : 1045
Tolerance	† Tolerance 1/min : +- 15
cm3/1000 strokes : 3.0	Check
Check tolerance cm3/1000s. : 6.0	+ speed 1/min : $+$ 20
cm3/1000s. : 6.0	rack travel mm : 0.50
	+ Tolerance mm : + 0.50
(B) SETTING OF INJECTION PUMP	+ Rated speed rpm : 1150
WITH GOVERNOR	+
	+
	İ
GUIDE SLEEVE POSITION	LOW IDLE
30176 566646 1 30111311	+
	+
control lever	+ control lever
position degree : - 1	+ position degree : 77.0
Rated speed rpm : 970	tolerance degree : +- 4.0
Rack travel in mm : 16.50	† + control lever
Tolerance mm : +- 1.30	position degree : 19.0
	tolerance degree : +- 4.0
	+
FULL LOAD DELIVERY AT FULL LOAD STOP	Setting point w/out bumper spring
Rated speed rpm : 700	+ Rated speed rpm : 100
Rated speed rpm : 700 Aneroid pressure	+ Rated speed rpm : 100
hPa : -	T CRT mm min. : > 10.00
Del. quantity	1 3.77
cm3/1000 strokes : 235.0	Testing:

Rated speed rpm rack travel mm Tolerance mm	: 300 : 4.50 : +- 0.10
Rated speed rpm rack travel mm	: 300 : 2.00
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 14.15 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 900 : 14.15 : +- 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 900 : 14.15 : + 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 10.70 : + 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 510 : 13.05 : + 0.05
Pressure hPa rack travel mm Tolerance mm	: 250 : 11.20 : + 0.20
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: - : 900
cm3/1000 strokes Tolerance cm3/1000 strokes	: 224.0 : +- 4.0

Check tolerance cm3/1000s.	: +- 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
STARTING FUEL DELI	IVERY
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
LOW IDLE	
Rated speed rpm	: 300
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/100C strokes Check tolerance cm3/1000s.	: +- 4.50 : +- 0.10 : 17.0 : +- 2.0 : +- 4.0 : 3.0 : 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : ISO 4113 Test oil

Combination No. : 0 402 646 992

Injection pump

Pump designation : PE6P120A720RS7021 EP type number : 0 412 626 869

Governor

Governer design. : RQ200/1000PA1036 Governer no. : 0 421 801 649

Cust. part No. : 1363610

Customer-spec. information Customer : SCANIA : DSI11E01 Motor

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration

damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

bar : 251.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.05 Tolerance mm : +- 0.05 Check tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 : -300 Phasing

Tolerance : +- 0.30

Check

tolerance °NW : +- 0.50

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

	+
Rack travel in mm : 13.45 Tolerance mm : + 0.05	GUIDE SLEEVE POSITION
Pated speed rpm : 250	control lever position degree : 102 Rated speed rpm : 600
Rack travel in mm : 6.30 Tolerance mm : +- 0.10	Rack travel in mm: 16.50
Del. quantity cm3/1000 strokes : 31.0 Tolerance	† Tolerance mm : +- 1.30
cm3/1000 strokes : +- 3.0 Check tolerance	CONTROL LEVER
cm3/1000s. : ← 6.0 Spreed	control lever
Tolerance cm3/1000 strokes : 4.0 Check tolerance	position degree : 43.0 tolerance degree : +- 4.0
cm3/1000s. : 8.0	control lever position degree : 98.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	tolerance degree : +- 4.0 RATED SPEED rack travel mm : 12.40
GUIDE SLEEVE TRAVEL	Rated speed rpm : 1045 Tolerance 1/min : + 5
Rated speed rpm : 1054 guide sleeve	Check + speed 1/min : +- 10
travel mm : 4.39 Tolerance mm : + 0.10	rack travel mm : 4.00 Rated speed rpm : 1185
Rated speed rpm : 250 guide sleeve	Tolerance 1/min : +- 15 Check speed 1/min : +- 20
travel mm : 1.08 Tolerance mm : +- 0.10	rack travel mm : 0.50
Rated speed rpm : 1000 guide sleeve	Tolerance mm : +- 0.50 Rated speed rpm : 1300
travel mm : 4.00 Tolerance mm : + 0.10	†
Rated speed rpm : 353 guide sleeve	LOW IDLE
travel mm : 3.46 Tolerance mm : + 0.10	control lever position degree : 66.0
Rated speed rpm : 420 guide sleeve	tolerance degree : +- 4.0
travel mm : 4.00 Tolerance mm : + 0.10	<pre>control lever position degree : 11.0 tolerance degree : +- 4.0</pre>
Rated speed rpm : 1460 guide sleeve	Setting point w/out bumper spring
travel mm : 11.50 Tolerance mm : +- 0.50	Rated speed rpm : 150
	T CRT mm min. : > 8.50

Testing:

Rated speed rpm : 250 rack travel mm : 6.30 Tolerance mm : + 0.10

rack travel mm : 2.00 Rated speed rpm : 350 Tolerance 1/min : +- 30

TORQUE CONTROL

Rated speed rpm : 700 rack travel mm : 13.45 Tolerance mm : + 0.05

Rated speed rpm : 1000 rack travel mm : 13.45 Tolerance mm : +- 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1500
rack travel mm : 13.45
Tolerance mm : + 0.05

Rated speed rpm : 500
Pressure hPa : rack travel mm : 12.90
Tolerance mm : + 0.20

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 235 rack travel mm : 13.25 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : Rated speed rpm : 1000
Del. quantity

cm3/1000 strokes : 227.0

Tolerance

cm3/1000 strokes : +- 4.0

Check tolerance

cm3/1000s. : +- 6.0

Aneroid pressure

hPa : -Rated speed rpm : 500

Del. quantity cm3/1000 strokes : 268.0

Tolerance

cm3/1000 strokes : +-- 1.0

Check tolerance

cm3/1000S. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 12.90 Tolerance mm : + 0.20 Del. quantity

cm3/1000 strokes : 230.0

Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance

cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm : 250

Rack travel in mm : 6.30
Tolerance nm : +- 0.10
Del. quantity
cm3/1000 strokes : 31.0
Tolerance
cm3/1000 strokes : +- 3.0
Check tolerance
cm3/1000S. : +- 6.0
Spreed

Tolerance

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 14.08.97 Test oil : ISO 4113

Combination No. : 0 402 648 812M

Injection pump

Pump designation : PE8P120A320LS7801

: -10

EP type number : 0 412 628 851

Governor

Governer design. : RQ300/1050PA717 Governer no. : 0 421 801 258

Cust. part No. :

Customer-spec. information

Motor : 0M442 LA Power KW : 320.0

TEST BENCH REQUIREMENTS

Inlet line : 5.1

Test oil inlet

: 40 temp. °C

Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Overflow quantity

min. l/h : 110 Tolerance l/h : +- 10.0

Test nozzle holde assembly : 1 688 901 105

Opening pressure

: 208.5 bar

Tolerance bar : +- 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 2.5

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.25 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 20.50

Tolerance mm : +- 0.50

Firing order : 8-7-2-6-3

: - 5- 4- 1

: 0-45-90-135-180 Phasing

: -225-270-315

Tolerance : \leftarrow 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance °NW : +- 0.75

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 15.20 Tolerance mm : + 0.10

C20

	,	mudula al sa ca
Dol grantity.		guide sleeve
Del. quantity cm3/1000 strokes :	223.0	travel mm : 6.05 Tolerance mm : +- 0.05
Tolerance		Dated aread are 1150
	10	Rated speed rpm : 1150
cm3/1000 strokes :	†	guide sleeve
		travel mm : 9.45
Check tolerance	+	Tolerance mm : +- 0.15
cm3/1000s. :	+ 4.0 +	
		
Spreed	+	GUIDE SLEEVE POSITION
	+	
Tolerance	 	
cm3/1000 strokes :	2.0	control lever
	1	position degree : 109
Check tolerance		Rated speed rpm : 600
	10.0	Mateu Speed (pill . 000
CIII.57 10005.	10.0	20.00
		Rack travel in mm : 20.00
	ŧ	Tolerance mm : +- 0.80
Rated speed rpm :	300 +	
	1	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm :	6.40	
	+- 0.10	Rated speed rpm : 1050
Del. quantity	1	Aneroid pressure
cm3/1000 strokes :	. 10 0	hPa : -
	17.0	•
Tolerance	. 70	Del. quantity
cm3/1000 strokes :	: +- 3.0 +	cm3/1000 strokes : 223.0
Check tolerance	+	Tolerance
cm3/1000s. :	: +- 6.0 +	cm3/1000 strokes : +- 1.0
Spreed	+	Check tolerance
Tolerance	+	cm3/1000s. : +- 4.0
cm3/1000 strokes :	: 5.0	Spreed
Check tolerance	1	Tolerance
cm3/1000s. :	8.0	cm3/1000 strokes : 7.0
cm3/10003.	7	
	Ť	Check tolerance
	· · · · · · · · · · · · · · · · · · ·	cm3/1000s. : 10.0
(B) SETTING OF INJE	ECTION PUMP +	
WITH GOVERNOR	+	
	-}-	~
		CONTROL LEVER
GUIDE SLEEVE TRAVEL	<u>.</u>	
	1	control lever
Rated speed rpm :	1000	position degree : 101.0
guide sleeve	T	tolerance degree : +- 4.0
travel mm :	6.25	coterance degree . *- 4.0
		DATEN COCEN
Tolerance mm :	+- 0.05	RATED SPEED
	+	rack travel mm : 14.20
Rated speed rpm :	300	Rated speed rpm : 1092
guide sleeve	+	Tolerance 1/min : +- 8
travel mm :	2.90	
Tolerance mm :	+ 0.10	rack travel mm : 4.00
•	1	Rated speed rpm : 1150
Rated speed rpm :	900	Tolerance 1/min : +- 15
	700	TOTAL ALICE TARRELL . TE 19
guide sleeve	1 15	pools trough as 10.75
travel mm :	6.15	rack travel mm : 0.75
Tolerance mm :	+- 0.05	Tolerance mm : +- 0.75
	+	Rated speed rpm : 1300
Rated speed rpm :	+ 600	
	1	
	•	

LOW IDLE	
control lever position degree tolerance degree	: 76.0 : +- 4.0
Setting point w/ou	t bumper spring
Rated speed rpm	: 200
CRT mm min.	; > 7.50
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 300 : 6.40 : ← 0.10
rack travel mm Rated speed rpm Folerance 1/min	: 2.00 : 399 : +- 20
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1050 : 15.20 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 850 : 15.60 : ← 0.15
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 500 : 1000
MEASUREMENT	
Pressure hPa rack travel mm Folerance mm	: 400 : 1.20 : ← 0.10
Pressure hPa rack travel mm Folerance mm	: 600 : 2.90 : +- 0.10
Start interlock	
Rated speed rpm	: > 100

	- •
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	
hPa Rated speed rpm	: 850
Del. quantity cm3/1000 strokes	: 233.0
Tolerance cm3/1000 strokes	: +- 2.0
Check tolerance cm3/1000S. Spreed	: +- 5.0
Tolerance cm3/1000 strokes	: 7.0
Check tolerance cm3/1000s.	: 10.0
Aneroid pressure	
hPa Rated speed rpm	: – : 500
Del. quantity cm3/1000 strokes Tolerance	: 152.0
cm3/1000 strokes Check tolerance	: +- 1.0
cm3/1000s.	: → 4.0
Tolerance cm3/1000 strokes	: 7.0
Check tolerance cm3/1000S.	: 10.0
STARTING FUEL DEL	TVEDY
Rated speed rpm	: 100
Del. quantity cm3/1000 strokes	-
Tolerance cm3/1000 strokes	: +- 10.0
Check tolerance cm3/1000s.	: +- 14.0
C.1137 10000 .	
LOW IDLE	
Rated speed rpm	: 300

Check

Check

speed 1/min : > 80

speed 1/min : < 240

Rack travel in mm Tolerance mm Del. quantity	:	+-	6.40 0.10
cm3/1000 strokes	:		19.0
Tolerance cm3/1000 strokes	:	+-	3.0
Check tolerance cm3/1000s.			6.0
Spreed	٠	T	6.0
Tolerance cm3/1000 strokes	:		5.0
Check tolerance cm3/1000s.	:		8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 19.08.97 Edition Test oil : ISO 4113

Combination No. : 0 402 648 839

Injection pump

Pump designation : PE8P120A720LS7125

: -10T EP type number : 0 412 628 890

Governor

Governer design. : RQV200...950PA736-1

Governer no. : 0 421 813 551

Cust. part No. : 380804

Customer-spec. information Customer : SCANIA Motor : DSC14 03

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Vibration

damper

(RoBo diaphragm) : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5 Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.05 Tolerance mm : +- 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-2-7-3-4

: - 5- 6- 8

Phasing : 0-45-90-135-180

: -225-270-315 Tolerance : + 0.50

Check

: **←** 0.75 tolerance °NW

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 225

Rack travel in mm : 5.00

	- 0.10 +		
Del. quantity cm3/1000 strokes :	18.0	LOW IDLE	
Tolerance cm3/1000 strokes : +-	- 2.0		
Check tolerance cm3/1000s. : +-	- 4.0	control lever	
Spreed Tolerance	7.0	tolerance degree	: +- 4.0
cm3/1000 strokes : Check tolerance	+	control lever position degree	
cm3/1000s. :	6.0	tolerance degree	
(B) SETTING OF INJECT	ON PUMP	Setting point w/o	
WITH GOVERNOR	‡	Rated speed rpm	
		CRT mm min.	: > 6.00
GUIDE SLEEVE POSITION	† +	Testing:	
control lever	‡	Rated speed rpm rack travel mm	: 5.00
position degree : - Rated speed rpm :		Tolerance mm	: + 0.10
Rack travel in mm :	16.50	rack travel mm Rated speed rpm	
Tolerance mm : +		Tolerance 1/min	
		TORQUE CONTROL	
CONTROL LEVER	<u> </u>	Rated speed rpm	: 950
control lever position degree :	50.0	rack travel mm Tolerance mm	: 13.85
tolerance degree : +-			
control lever position degree :	95.0	ANEROID/ALTITUDE COMPENSATOR TEST	
tolerance degree : +		COLI ENOMION TEOT	
RATED SPEED rack travel mm :	12.80	SETTING	
Rated speed rpm : Tolerance 1/min : +-	995	Rated speed rpm Pressure hPa	: 500 : 900
Check	+	rack travel mm	: 13.85
speed 1/min : +	- 10 +	Tolerance mm	: + 0.05
Rated speed rpm :	4.00	Rated speed rpm Pressure hPa	: 500 : –
Tolerance 1/min : +- Check	- 15 +	rack travel mm Tolerance mm	: 11.40 : +- 0.20
speed 1/min : +	- 20 +	MEASUREMENT	
Tolerance mm : +-	0.50 - 0.50	Rated speed rpm	: 500
Rated speed rpm :	1250 +	Pressure hPa	: 215
	1	rack travel mm Tolerance mm	: 12.00 : + 0.15
	т	A COLOT GATE CHIMI	. 0.15

Pressure hPa : 365 rack travel mm : 12.85 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 900 Rated speed rpm : 950

Del. quantity

cm3/1000 strokes : 215.0

Tolerance

cm3/1000 strokes : +- 4.0

Check tolerance

cm3/1000s. — 6.0

Aneroid pressure

hPa : -Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 160.0

Tolerance

cm3/1000 strokes : \leftarrow 2.0

Check tolerance

cm3/1000s. : \leftarrow 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50

Del. quantity

cm3/1000 strokes : 265.0

Tolerance

cm3/1000 strokes : \leftarrow 20.0

Check tolerance

cm3/1000s. : \leftarrow 24.0

LOW IDLE

Rated speed rpm : 225

Rack travel in mm : 5.00 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 18.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed

Tolerance

cm3/1000 strokes : 3.0

Check tolerance

cm3/1000s : 6.0

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 19.08.97 : ISO 4113 Test oil

Combination No. : 0 402 648 867

Injection pump

Pump designation : PE8P120A720/4LS7166

: -1

EP type number : 0 412 628 897

Governor

Governer design. : RQ750PA758-7 Governer no. : 0 421 801 490

Cust. part No. : 1305125

Customer-spec. information : SCANIA Customer

: DS 14 Motor

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Vibration damper

(RoBo diaphragm) : 3.2

Test oil inlet

40 temp. °C : +- 2.0 Tolerance °C

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

5.05 Prestroke mm : +- 0.05 Tolerance mm

Check

tolerance mm : **←** 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-2-7-3-4

: - 5- 6- 8

Phasing : 0-45-90-135-180

: -225-270-315

: +- 0.50 Tolerance

Check

tolerance °NW : +- 0.75

Start of delivery mark

: **←** 0.50 Tolerance

Check

tolerance *NW : +- 0.75

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 12.55

Tolerance mm : \leftarrow 0.05

	+			
Del. quantity cm3/1000 strokes : 253	3.0	CONTROL LEVER		
Tolerance cm3/1000 strokes : +- 1	1.0	control lever position degree tolerance degree		30.0 4.0
Check tolerance cm3/1000s. : +- 4	4.0	control lever		
Spreed		position degree tolerance degree		89.0 4.0
Tolerance cm3/1000 strokes : 7	7.0	ASSEMBLY GOVERNOR	SETTIN	JG
Check tolerance cm3/1000s. : 10	0.0	Rated speed rpm rack travel mm		750 1.50
	+	Rated speed rpm Tolerance 1/min rack travel mm	: : +-	788 4 4.00
	.10		•	4.00
Tolerance mm : + 0.	.10 +	rack travel mm		0.50
Del. quantity cm3/1000 strokes : 16	5.0	Tolerance mm Rated speed rpm	: +-	850
Tolerance	,	Nated Speed 1 pin	•	0,00
	+.0			
Check tolerance cm3/1000s. : +- 6		Rated speed rpm rack travel mm		751 4 50
Spreed : +- 6	5.0	rack travel mm	: 1	1.50
Tolerance	+	Rated speed rpm	:	789
	+.0	Tolerance 1/min	: +-	4
Check tolerance	, ,	rack travel mm	:	4.00
cm3/1000s. : 7	7.0	rack travel mm	•	0.50
	I	Tolerance mm		0.50
(B) SETTING OF INJECTION F WITH GOVERNOR	PUMP	Rated speed rpm	•	850
	I	Rated speed rpm	:	752
		rack travel mm		1.50
FULL LOAD DELIVERY AT FULL	LOAD STOP	Doted speed spe		700
Rated speed rpm : 700	1	Rated speed rpm Tolerance 1/min	: +-	790 4
Aneroid pressure	'	rack travel mm		4.00
hPa : 900) +			• • •
Del. quantity cm3/1000 strokes : 253	, ,	rack travel mm Tolerance mm		0.50
cm3/1000 strokes : 253	7.0	Rated speed rpm		0.50 850
	1.0	Turbu opoou i piii	•	030
Check tolerance	+			
	+.0	Rated speed rpm		753 1 50
Spreed Tolerance	Ī	rack travel mm		1.50
	7.0	Rated speed rpm	:	791
Check tolerance	+	Tolerance 1/min	: +-	4
cm3/1000s. : 10	0.0	rack travel mm	:	4.00
	1	rack travel mm	:	0.50
	1	Tolerance mm		0.50
	•			

Rated speed rpm : 850 nack travel mm : 754 11.50 Rated speed rpm : 792 Tolerance 1/min : +rack travel mm : 4.00 rack travel mm : 0.50
Tolerance mm : + 0.50
Rated speed rpm : 850 Rated speed rpm : 755 rack travel mm : 11.50 793 Rated speed rpm : Tolerance 1/min : +rack travel mm : 4.00 Rated speed rpm : 850

TORQUE CONTROL

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 900
rack travel mm : 12.55
Tolerance mm : + 0.05

Rated speed rpm : 500 Pressure hPa : - rack travel mm : 9.90 Tolerance mm : \leftarrow 0.20

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 365 rack travel mm : 11.85 Tolerance mm : + 0.05

Pressure hPa : 215 rack travel mm : 10.90

Tolerance mm : \leftarrow 0.15

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

Rated speed rpm : 500

Del. quantity cm3/1000 strokes : 160.0

Tolerance

cm3/1000 strokes : \leftarrow 2.0

Check tolerance

cm3/1000s. : +- 4.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 19.08.97 Test oil : ISO 4113

Combination No. : 0 402 648 868

Injection pump

Pump designation : PE8P120A720LS7180

: -10

EP type number : 0 412 628 892

Governor

Governer design. : RQV350...1050PA795

: -8

Governer no. : 0 421 813 770

Cust. part No. : 1305130

Customer—spec. information Customer : SCANIA Motor : DSI 14

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Vibration damper

(RoBo diaphragm) : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : ← 0.1

Test nozzle holde

assembly : 1 688 901 019

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.05
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50Tolerance mm : \leftarrow 1.50

Firing order : 1-2-7-3-4

: - 5- 6- 8

Phasing : 0-45-90-135-180

: -225-270-315

: **←** 0.50

Check

Tolerance

tolerance *NW : + 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm :	350 +		
Rack travel in mm : Tolerance mm :	4.60 +- 0.30		
Del. quantity cm3/1000 strokes :	+	LOW IDLE	
Tolerance	77.0		
cm3/1000 strokes :	+ 2.0	control lever	70.0
Check tolerance cm3/1000s. :	+ 4.0	position degree : tolerance degree :	
Spreed	+	-	
Tolerance cm3/1000 strokes :	3.0	control lever position degree	· 16 በ
Check tolerance	+	tolerance degree	
cm3/1000s. :	6.0	-	
	Ţ	Setting point w/out	r bumper spring
(B) SETTING OF INJECT WITH GOVERNOR	CTION PUMP	Rated speed rpm	: 250
	1	CRT mm min.	: > 6.00
GUIDE SLEEVE POSITION		Testing:	
13252 322212 1 001110		Rated speed rpm	: 350
control lever	†	rack travel mm Tolerance mm	: 4.60
	- 1 I	Toterance fixit	. +- 0.50
Rated speed rpm :	1325	Rated speed rpm	: 300
Rack travel in mm : Tolerance mm :		TORQUE CONTROL	
	1	Rated speed rpm	: 1050
		rack travel mm	: 13.25
CONTROL LEVER	+	Tolerance mm	: +- 0.05
control lever	· · · · · · · · · · · · · · · · · · ·	ANEROTO (AL TITUDE	
position degree : tolerance degree :		ANEROID/ALTITUDE COMPENSATOR TEST	
	+		
control lever position degree :	102 0	SETTING	
tolerance degree :			
RATED SPEED	†	Rated speed rpm : Pressure hPa	: 500 : 900
rack travel mm :	12.20 I	rack travel mm	: 13.25
Rated speed rpm :	1095 _	Tolerance mm	: +- 0.05
Tolerance 1/min : Check	← 5	Rated speed rpm	: 500
	+- 10 	Pressure hPa	-
·	, oo †	rack travel mm	9.90
rack travel mm : Rated speed rpm :	4.00 + 1230 +	Tolerance mm	: +- 0.20
Tolerance 1/min :	+ 15	MEASUREMENT	
Check speed 1/min :	+ 20 +	Rated speed rpm	: 500
rack travel mm :	0.50	Pressure hPa	: 215
Tolerance mm :	← 0.50	rack travel mm	: 10.90
Rated speed rpm :	1350 +	Tolerance mm	: ← 0.10

Pressure hPa : 365 rack travel mm : 11.85 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 900 Rated speed rpm : 1050

Del. quantity cm3/1000 strokes

cm3/1000 strokes : 262.0

Tolerance

cm3/1000 strokes : + 4.0

Check tolerance

cm3/1000s. : +- 6.0

Aneroid pressure

hPe : Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 160.0

Tolerance

cm2/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100

rack travel mm : 9.90 Tolerance mm : +- 0.20

Del. quantity

cm3/1000 strokes : 130.0

Tolerance

cm3/1000 strokes : \leftarrow 20.0

Check tolerance

cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm : 350

Rack travel in mm : 4.60 Tolerance mm : +- 0.30

Del. quantity

ודודץ

cm3/1000 strokes : 17.0 Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed

Tolerance

cm3/1000 strokes : 3.0

Check tolerance

cm3/1000s. : 6.0

End of test specification sheet

004

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 19.08.97 : ISO 4113

Combination No. : 0 402 648 873

injection pump

Pump designation : PE8P12OA92O/4LS7166

: -1

EP type number : 0 412 628 897

Governor

Governer design. : RQ900PA758-13

Governer no. : 0 421 801 501

Cust. part No. : 1305126

Customer-spec. information Customer : SCANIA Motor : DS 14

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Vibration

damper

(RoBo diaphragm) : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5 Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.05 Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-2-7-3-4

: - 5- 6- 8

Phasing : 0-45-90-135-180

: -225-270-315

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : + 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

		+ Rated speed rp	
Rack travel in mo Tolerance mm	n: 5.10 :+- 0.10	+ rack travel mm	: 11.50
Tolerance cm3/1000 strokes	: +- 4.0	Rated speed rpi	
Check tolerance	; +- 4.0	Tolerance 1/min	
cm3/1000s.	: +- 6.0	+	
Spreed Tolerance		rack travel mm Tolerance mm	
cm3/1000 strokes	: 4.0	Rated speed rp	
Check tolerance cm3/1000s.	: 7.0	†	
CIID/10003.		Rated speed rp	m : 901
(0) 00777110 00 71	LIFOTY ON DUMP	rack travel mm	
(B) SETTING OF IN WITH GOVERNOR	MECITON PUMP	+ Rated speed rp	m : 947
WITT GOVERNMENT		+ Tolerance 1/mi	n: +- 5
GUIDE SLEEVE TRAN	/FI	rack travel mm	: 4.00
GOIDE SEELVE TRAN		T rack travel mm	
Rated speed rpm guide sleeve	: 909	Tolerance mm Rated speed rp	
travel mm	: 4.74	+ Kated speed rp	m : 1000
Tolerance mm	; 0.25	+	222
Rated speed rpm	: 630	+ Rated speed rp	
guide sleeve		+	
travel mm Tolerance mm	: -6.36 : +- 0.25	Rated speed rp	
		rack travel mm	
Rated speed rpm guide sleeve	: 1040	rack travel mm	: 0.50
travel mm	: 16.81	Tolerance mm	
Tolerance mm	: +- 0.25	+ Rated speed rp	m : 1000
Rated speed rpm	: 977	Ŧ	
guide sleeve travel mm	: 10.00	+ Rated speed rp	
Tolerance mm	: + 0.25	T rack travet min	. 11.50
Datad award www	: 1040	+ Rated speed rp	
Rated speed rpm guide sleeve	: 1040	+ Tolerance 1/min	
travel mm	: 11.50	+	
Tolerance mm	: + 0.50	rack travel mm Tolerance mm	
		+ Rated speed rp	
CONTROL LEVER		‡	
		Rated speed rp	
control lever position degree	: 24.0	t rack travel mm	: 11.50
tolerance degree		Rated speed rp	
		Tolerance 1/min	
control lever position degree		T rack travet mm	: 4.00
tolerance degree		rack travel mm	
		Tolerance mm Rated speed rp	
ASSEMBLY GOVERNOR	R SETTING	+	
		+	

Rated speed rpm : 905 rack travel mm : 11.50

Rated speed rpm : 951
Tolerance 1/min : + 5
rack travel mm : 4.00

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 900
rack travel mm : 12.55
Tolerance mm : + 0.05

Rated speed rpm : 500
Pressure hPa : rack travel mm : 10.20
Tolerance mm : + 0.20

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 215 rack travel mm : 10.90 Tolerance mm : +- 0.10

Pressure hPa : 365 rack travel mm : 11.85 Tolerance mm : ← 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 500 Del. quantity

cm3/1000 strokes : 160.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 4.0

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 19.08.97 : 13.00.71 : ISO 4113 Test oil

Combination No. : 0 402 648 883

Injection pump

Pump designation : PE8P12OA720LS7125

: -10

EP type number : 0 412 628 891

Governor

Governer design. : RQV300...900PA795

: -11

Governer no. : 0 421 813 847

Cust. part No. : 1305129

Customer-spec. information Customer : SCANIA : DS14 48M Motor

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Vibration

damper

(RoBo diaphragm) : 3.2

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Tolerance l/h: \leftarrow 10.0

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.05 Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0 10

Rack travel in mm : 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-2-7-3-4

: - 5- 6- 8

Phasing : 0-45-90-135-180

: -225-270-315 : +- 0.50 Tolerance

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

700	†
Rated speed rpm : 300	CHINE CLEENE DOCLTION
Rack travel in mm : 4.80	GUIDE SLEEVE POSITION
Tolerance mm : +- 0.10	Ī
Del. quantity	control lever
cm3/1000 strokes : 17.0	position degree : - 1
Tolerance -	Rated speed rpm : 1035
cm3/1000 strokes : +- 2.0	L Rated speed (pill . 103)
Check tolerance	Rack travel in mm : 12.50
cm3/1000s. : +- 4.0	Tolerance mm : +- 1.30
Spreed -	1 10001 01100 11111
Tolerance	
cm3/1000 strokes : 3.0	
Check tolerance	CONTROL LEVER
cm3/1000s. : 6.0	
•	control lever
-	position degree : 47.0
(B) SETTING OF INJECTION PUMP	tolerance degree : +- 4.0
WITH GOVERNOR -	+
	control lever
	position degree : 105.0
GUIDE SLEEVE TRAVEL -	tolerance degree : +- 4.0
•	+
Rated speed rpm : 960 -	RATED SPEED
guide sleeve	rack travel mm : 12.50
travel mm : 8.18	Rated speed rpm : 945
Tolerance mm : +- 0.20 -	↑ Tolerance 1/min : ← 5
	Check
Rated speed rpm : 300 -	speed 1/min : + 10
guide sleeve -	t
travel mm : 1.56	rack travel mm : 4.00
Tolerance mm : +- 0.15	Rated speed rpm · 1040
- Marked accordance (200	Tolerance 1/min : +- 15
Rated speed rpm : 688	Check
guide steeve -	speed 1/min : +- 20
travel mm : 5.27	0.50
Tolerance mm : +- 0.25	rack travel mm : 0.50
Rated speed rpm : 345	Tolerance mm : +- 0.50 Rated speed rpm : 1150
	rated speed rpm : 1130
guide sleeve - travel mm : 2.04	Ī
Tolerance mm : $+$ 0.25	
TOGGI GING TO COLO	
Rated speed rpm : 395	LOW IDLE
guide steeve	-
travel mm : 2.62	1
Tolerance mm : + 0.25	control lever
•	position degree : 73.0
Rated speed rpm : 450	tolerance degree : +- 4.0
guide sleeve	+
travel mm : 3.12	control lever
Tolerance mm : +- 0.25	position degree : 15.0
-	tolerance degree : + 4.0
Rated speed rpm : 1190	+
guide sleeve	Setting point w/out bumper spring
travel mm : 11.50 -	+
Tolerance mm : +- 0.50 -	Rated speed rpm : 175
•	+
-	CRT mm min. :> 6.30

Testing:

Rated speed rpm : 300 rack travel mm : 4.80 rack travel mm : +- 0.10 Tolerance mm

Rated speed rpm : 325

TORQUE CONTROL

Rated speed rpm : 850 rack travel mm : 13.55 Tolerance mm : \leftarrow 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

500 Rated speed rpm : Pressure hPa : 1500 rack travel mm : 13.55 Tolerance mm : +- 0.05

Rated speed rpm : 500 Pressure hPa : - rack travel mm : 11.35 Tolerance mm : \leftarrow 0.20

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 215 rack travel mm : 12.00 Tolerance mm : + 0.15

Pressure hPa : 365 rack travel mm : 12.85 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 850 Rated speed rpm :

Del. quantity

cm3/1000 strokes : 209.0

Tolerance

cm3/1000 strokes : +- 4.0

Check tolerance

cm3/1000s. : +- 6.0

Aneroid pressure

500 Rated speed rpm :

Del. quantity

cm3/1000 strokes: 160.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

rack travel mm : 20.5 20.50 Tolerance mm : +- 0.50 Del. quantity

cm3/1000 strokes : 265.0

Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance

cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm : 300

Rack travel in mm: 4.80 Tolerance mm : +- 0.10 Del. quantity

cm3/1000 strokes : 17.0 Tolerance

cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +-4.0

Spreed Tolerance

cm3/1000 strokes : 3.0

Check tolerance

cm3/1000S. : 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 24.07.97 Test oil : ISO 4113

Combination No. : 0 402 716 805

Injection pump

Pump designation : PES6P120A700LS7442

EP type number : 0 412 726 972

Governor

Governer design. : Governer no. :

Cust. part No. : 0280743902

Customer-spec. information

Customer : MTU Motor

: 6R183-02

Power KW : 369.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0 temp. °C

40

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

: 208.5

Tolerance bar : + 1.5

Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.35 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 20.50 Tolerance mm : - 0.50

Firing order : 6-3-5-1-4-

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance °NW : **←** 0.75

Barrel no. : 6

BASIC SETTING

Rated speed rpm : 750

Rack travel in mm: 10.45

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 184.0

Tolerance cm3/1000 strokes	: +- 1.0	
Check tolerance cm3/1000s.	: + 4.0	
Spreed		
Tolerance cm3/1000 strokes	: 5.0	
Check tolerance cm3/1000s.	: 9.0	
Rated speed rpm	: 300	
Rack travel in mm	: 5.55	
Tolerance mm Del. quantity	: +- 0.05	
cm3/1000 strokes Tolerance	: 18.0	
cm3/1000 strokes	: +- 3.0	
Check tolerance cm3/1000s.	: +- 6.0	
Spreed		
Tolerance cm3/1000 strokes	: 8.0	
Check tolerance cm3/1000s.	: 12.0	
(B) SETTING OF INJ	JECTION PUMP	
WITH GOVERNOR	AT THE LOAD CTOR	
WITH GOVERNOR FULL LOAD DELIVERY	AT FULL LOAD STOP	
WITH GOVERNOR FULL LOAD DELIVERY Rated speed rpm	AT FULL LOAD STOP	-
WITH GOVERNOR FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa		
WITH GOVERNOR FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes	: 750	
WITH GOVERNOR FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 750 : -	
FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 750 : - : 184.0	
WITH GOVERNOR	: 750 : - : 184.0 : +- 1.0	

Rated speed rpm rack travel mm Tolerance mm	:	+-	300 5.55 0.05	
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	•	+	750 10.45 0.05	
1.01.7015				
LOW IDLE Rated speed rpm	:		300	
Rated speed rpm Rack travel in mm	:	+-	5.55	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity	:	+-	5.55 0.05	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance	•	+-	5.55 0.05 18.0	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	:	+-	5.55 0.05 18.0 3.0	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	•	+-	5.55 0.05 18.0	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	•	+-+-+-	5.55 0.05 18.0 3.0	

End of test specification sheet

Testing:

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 18.08.97 Test oil : ISO 4113

Combination No. : 0 402 736 810

Injection pump

Pump designation : PES6P110A120RS7213 EP type number : 0 412 716 804

Governor

Governer design. : RQV400...1250PA964

: -2K

Governer no. : 0 421 815 254

Cust. part No. : 3921777

Customer-spec. information Customer : CDC : 6BTA-A Motor Power KW : 141.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 1.5

Overflow quantity

min. L/h : 120 Tolerance L/h : +- 5.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 har Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.40 Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-5- 3- 6- 2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

tolerance °NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 6.00 Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

+	
BASIC SETTING	Rated speed rpm : 1250 Aneroid pressure
+	hPa : 1200
Rated speed rpm : 1250	Del. quantity cm3/1000 strokes : 163.0 Tolerance
Rack travel in mm: 14.85 Tolerance mm: + 0.05	cm3/1000 strokes : +- 1.0 Check tolerance
	cm3/1000s. : +- 4.0
Del. quantity cm3/1000 strokes : 163.0	Spreed Tolerance cm3/1000 strokes : 5.0
Tolerance cm3/1000 strokes : +- 1.0	Check tolerance cm3/1000s. : 9.0
Check tolerance cm3/1000s. : +- 4.0	
Spreed	CONTROL LEVER
+	control lever
Tolerance cm3/1000 strokes : 5.0	position degree : 63.0 tolerance degree : 4.0
Check tolerance	control lever
cm3/1000s. : 9.0	position degree : 119.0 tolerance degree : +- 4.0
Ţ	RATED SPEED
Rated speed rpm : 400 +	rack travel mm : 13.80 Rated speed rpm : 1300
Rack travel in m ² : 5.50	Tolerance 1/min : +- 5
Tolerance mm : += 0.10 += Del. quantity	rack travel mm : 4.00
cm3/1000 strokes : 36.0	Rated speed rpm : 1475
Tolerance	Tolerance 1/min : + 15
cm3/1000 strokes : +- 3.0 +- Check tolerance +-	rack travel mm : 0.50
cm3/1000s. : +- 5.0	Tolerance mm : +- 0.50
Spreed + Tolerance +	Rated speed rpm : 1600
cm3/1000 strokes : 8.0	
Check tolerance + cm3/1000s. : 12.0	
cm3/1000s. : 12.0	LOW IDLE
(D) CETTING OF TALLECTION DUNG	
(B) SETTING OF INJECTION PUMP +	control lever
+	position degree : 71.0
	tolerance degree : +- 4.0
GUIDE SLEEVE POSITION	control lever
Rated speed rpm : 1450	position degree : 15.0
Rated speed rpm : 1450 +	tolerance degree : +- 4.0
Rack travel in mm: 13.80 + Tolerance mm: +- 1.30 +	Setting point w/out bumper spring
	Rated speed rpm : 275
FULL LOAD DELIVERY AT FULL LOAD STOP	CRT mm min. : > 7.20

Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 400 : 5.50 : +- 0.10
Rated speed rpm	: 423
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1250 : 14.85 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 800 : 13.10 : +- 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	
MEASUREMENT	
Rated speed rpm	: 1250
Pressure hPa rack travel mm Tolerance mm	: 690 : 13.40 : +- 0.20
Pressure hPa rack travel mm Tolerance mm	: 365 : 10.25 : + 0.05
Start interlock	
Rated speed rpm Rated speed rpm	: > 100 : < 290
Check speed 1/min Check	: > 80
speed 1/min	: < 300
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa	: 1200

Rated speed rpm Del. quantity	:	800	
cm3/1000 strokes	:	161.	כ
Tolerance cm3/1000 strokes	: +	- 3.	כ
Check tolerance cm3/1000s.	: +	- 6.0)
Spreed Tolerance			
cm3/1000 strokes Check tolerance	:	8.)
cm3/1000s.	:	12.	ט
Aneroid pressure			
hPa Rated speed rpm	:	- 500	
Del. quantity cm3/1000 strokes	:	97.	5
Tolerance cm3/1000 strokes	•	- 2.	
Check tolerance			
cm3/1000s.	: +	- 4.	J
	•	- r • ·	
	· · · ·		
STARTING FUEL DELI		RY.	
STARTING FUEL DELI Rated speed rpm rack travel mm	LVER	100 12.5	0
STARTING FUEL DELI Rated speed rpm rack travel mm Tolerance mm Del. quantity		100 12.5 - 0.5	0
STARTING FUEL DELI Rated speed rpm rack travel mm Tolerance mm		100 12.5	0
STARTING FUEL DELI Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: +	100 12.5 - 0.5	0
STARTING FUEL DELI Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance	: +	100 12.5 — 0.5 155.	0
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: +	100 12.5 — 0.5 155.4 — 20.	0
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: +	100 12.5 — 0.5 155.4 — 20.	0
STARTING FUEL DELI Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: +	100 12.5 - 0.5 155. - 20.	0
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. LOW IDLE Rated speed rpm Rack travel in mm	: +	100 12.5 - 0.5 155. - 20. - 25.	
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. LOW IDLE Rated speed rpm	: +	100 12.5 - 0.5 155. - 20. - 25.	

LOW IDLE			
Rated speed rpm	:		400
Rack travel in mm Tolerance mm Del. quantity	:	+-	5.50 0.10
cm3/1000 strokes Tolerance	:		36.0
cm3/1000 strokes	:	+-	3.0
Check tolerance cm3/1000s. Spreed	:	+	5.0
Tolerance cm3/1000 strokes Check tolerance	:		8.0
cm3/1000s.	:		12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 18.08.97 : ISO 4113

Combination No. : 0 402 736 811

Injection pump

Pump designation : PES6P110A120RS7213 EP type number : 0 412 716 804

Governor

Governer design. : RQV400...1250PA964

: -3K

Soverner no. : 0 421 815 255

Cust. part No. : 3921776

Customer-spec. information Customer : CDC : 6BTA-A : 147.0 Motor Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 1.5

Overflow quantity

min. l/h : 120 Tolerance l/h : + 5.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm : 4.40 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 14.85

Tolerance mm : +- 0.05

Rack travel in mm: 5.60 Tolerance mm: $: \leftarrow 0.10$

(B) SETTING OF INJECTION PUMP WITH GOVERNOR	† Tolerance mm : +- 0.05
WITH GOVERNOR	Rated speed rpm : 800 rack travel mm : 13.30
GUIDE SLEEVE POSITION	Tolerance mm : +- 0.10
	ANEROID/ALTITUDE
control lever position degree : - 1	COMPENSATOR TEST
	+ SETTING
CONTROL LEVER	Rated speed rpm : 1250
control lever	Pressure hPa : 1200
position degree : 60.0 tolerance degree : +- 4.0	rack travel mm : 14.85 Tolerance mm : + 0.05
	Rated speed rpm : 1250
RATED SPEED	Rated speed rpm : 1250 Pressure hPa : - rack travel mm : 8.40 Tolerance mm : + 0.20
rack travel mm : 13.80	f rack travel mm : 8.40
Rated speed rpm : 1295 Tolerance 1/min : +- 5	† Tolerance mm : + 0.20
Toterance I/min : +- 5	# MEASUREMENT
rack travel mm : 4.00	THEASOREMENT
Rated speed rpm : 1475 Tolerance 1/min : +- 15	Rated speed rpm : 1250
	Pressure hPa : 755
rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1600	† rack travel mm : 13.90
Tolerance mm : +- 0.50	Tolerance mm : +- 0.20
Rated speed rpm : 1600	Brazzona I.B. (40)
	+ Pressure hPa : 410 + rack travel mm : 10.65
	Tolerance mm : + 0.05
LOW IDLE	‡ <u></u>
	Start interlock
control lever	Rated speed rpm : > 100
position degree : 16.0 tolerance degree : + 4.0	Rated speed rpm : < 290
	+ Check
Setting point w/out bumper spring	+ speed 1/min : > 80
Rated speed rpm : 275	+ Check + speed 1/min : < 300
CRT mm min. : > 7.20	5UEL DE: TUEDY CHADACTERIOTER
Testing:	+ FUEL DELIVERY CHARACTERISTICS
Rated speed rpm : 400	Aneroid pressure
	hPa : 1200
rack travel mm : 5.60 Tolerance mm : +- 0.10	Rated speed rpm : 800
	† Del. quantity
Rated speed rpm : 423	+ cm3/1000 strokes : 159.5
	Tolerance
TOROUE CONTROL	cm3/1000 strokes : +- 3.0 Check tolerance
TORQUE CONTROL Rated speed rpm : 1250	+ cm3/1000s. : +- 6.0
rack travel mm : 14.85	+ Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. 12.0

Aneroid pressure

hPa 500 Rated speed rpm :

Del. quantity

cm3/1000 strokes : 92.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s.

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 12.40 Tolerance mm : +- 0.50

Del. quantity cm3/1000 strokes : 155.0

Tolerance

cm3/1000 strokes : \leftarrow 20.0

Check tolerance

cm3/1000s. : +- 25.0

LOW IDLE

Rack travel in mm : 5.60 Tolerance mm : \leftarrow 0.10

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 18.08.97 : ISO 4113

Combination No. : 0 402 736 856

Injection pump

Pump designation : PES6P110A120RS7213

EP type number : 0 412 716 804

Governor

Governer design. : RQV350...1250PA964

: -26K

Covernor no.

: 0 421 315 426

Cust. part No. : 3282240

Customer-spec. information Customer : CUMMINS

Motor

: 6BTAA Power KW : 172.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40

Tolerance °C : +- 2.0

Overflow valve : 1 417 413 093

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

26.0 Test pressure bar :

Tolerance bar : +- 1.0

Prestroke mm 4.40 Tolerance mm : +- 0.05

Check

: ← 0.10 tolerance mm

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-5- 3- 6- 2-

Phasing : 0-60-120-180-240

: -300

: **+-** 0.50 Tolerance

Check

tolerance 'NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 6.00

Tolerance : +- 0.50 Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 15.10

Tolerance mm : \leftarrow 0.05

020

+	Rated speed rpm : 1440
Rated speed rpm : 350	•
Darly Association on F /O	Rack travel in mm: 9.00
Rack travel in mm: 5.40	Tolerance mm : +- 3.00
Tolerance mm : +- 0.10 + Del. quantity +-	•
cm3/1000 strokes : 22.5	·
Tolerance	CONTROL LEVER
cm3/1000 strokes : +- 3.0	CONTROL LEVER
Check tolerance	control lever
cm3/100Qs. : +- 5.0	position degree : 123.0
Spreed	tolerance degree : +- 4.0
Tolerance	
cm3/1000 strokes : 7.0	RATED SPEED
Check tolerance	rack travel mm : 15.30
cm3/1000s. : 11.0	Rated speed rpm : 1325
†	Tolerance 1/min : +- 5
(D) CETTING OF THE PATENT DIVIN	
(B) SETTING OF INJECTION PUMP	rack travel mm : 4.00
WITH GOVERNOR	Rated speed rpm : 1480
	Tolerance 1/min : +- 15
GUIDE SLEEVE TRAVEL +	rack travel mm : 0.50
THE PERSON OF TH	Tolerance mm : +- 0.50
Rated speed rpm : 1346	Rated speed rpm : 1600
guide sleeve	•
travel mm : 8.44	•
Tolerance mm : +- G.25	
+	
Rated speed rpm : 350	- LOW IDLE
guide sleeve	•
travel mm : 1.94	•
Tolerance mm : + 0.25	control laver
Data d around area. 8/0	position degree : 70.0
Rated speed rpm : 840 + guide sleeve	tolerance degree : +- 4.0
travel mm : 4.58	Setting point ways human enging
Tolerance mm : + 0.25	Setting point w/out bumper spring
	Rated speed rpm : 250
Rated speed rpm : 403	
guide sleeve	CRT mm min. :> 7.20
travel mm : 2.53	
Tolerance mm : + 0.25	Testing:
+	
Rated speed rpm : 450	Rated speed rpm : 350
guide sleeve	rack travel mm : 5.40
travel mm : 2.76	Tolerance mm : +- 0.10
Tolerance mm : +- 0.25 +	·
1/20	Rated speed rpm : 375
Rated speed rpm : 1620	•
guide sleeve	TODOUT CONTROL
travel mm : 11.50 + Tolerance mm : + 0.50	- TORQUE CONTROL - Rated speed rpm : 1100
Tolerance mm : + 0.50	Rated speed rpm : 1100 rack travel mm : 15.10
	Tolerance mm : +- 0.05
GUIDE SLEEVE POSITION	
	Rated speed rpm : 800
1	rack travel mm : 13.70
control lever	rack travel mm : 13.70 Tolerance mm : +- 0.10
position degree : -1	•

Rated speed rpm rack travel mm Tolerance mm		+ Check tolerance + cm3/1000s. + Spreed + Tolerance	: +- 6.0
Rated speed rpm rack travel mm	: 13.70	cm3/1000 stroke: Check tolerance	
Tolerance mm	: +- 0.15		: 12.0
ANEROID/ALTITUDE COMPENSATOR TEST		+ Aneroid pressure	: -
SETTING		+ Rated speed rpm + Del. quantity + cm3/1000 strokes	
Rated speed rpm Pressure hPa		Tolerance cm3/1000 strokes Check tolerance	
rack travel mm Tolerance mm	: 16.30	cm3/1000s.	
Rated speed rpm Pressure hFa	: -	STARTING FUEL DI	ELIVERY
rack travel mm Tolerance mm	: 9.05 : +- 0.20	+ Rated speed rpm + rack travel mm	: 100 : 13.50
MEASUREMENT		rack travel mm Tolerance mm Del. quantity	: +- 0.50
Rated speed rpm		cm3/1000 strokes Tolerance	
Pressure hPa rack travel mm	: 10.75	cm3/1000 strokes Check tolerance	
Tolerance mm		+ cm3/1000s.	: +- 24.0
Pressure hPa rack travel mm Tolerance mm	: 14.35	‡	
		LOW IDLE	
Start interlock		Rated speed rpm	: 350
Rated speed rpm Rated speed rpm		Rack travel in r Tolerance mm Del. quantity	
Check speed 1/min Check	: > 80	cm3/1000 strokes Tolerance cm3/1000 strokes	
speed 1/min	: < 300	Check tolerance cm3/1000s.	
FUEL DELIVERY CHA	ARACTERISTICS	Spreed Tolerance cm3/1000 strokes	
Aneroid pressure hPa Rated speed rpm Del. quantity		theck tolerance cm3/1000s.	
cm3/1000 strokes Tolerance			
cm3/1000 strokes	: +- 3.0	+ End of test spec	cification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 18.08.97 Test oil : 180 4113

Combination No. : 0 402 736 858

Injection pump

Pump designation : PES6P110A120RS7214 EP type number : 0 412 716 805

Governor

Governer design. : RQV350...1200PA964

: -28K

Governer no. : 0 421 815 428

Cust. part No. : 3282464

Customer-spec. information
Customer : CUMMINS
Motor : 6CTA-A
Power KW : 156.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. *C : 40
Tolerance *C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 1.5

Overflow quantity

min. L/h : 120 Tolerance L/h : +- 10.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.40 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 5.50 Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm: 12.35 Tolerance mm : \leftarrow 0.05 Rack travel in mm: 5.50 Tolerance mm : \leftarrow 0.10 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1200 guide sleeve guide steeve travel mm : 9.10 Tolerance mm : \leftarrow 0.10 Rated speed rpm : 350 guide sleeve : 1.80 travel mm Tolerance mm : +- 0.20 Rated speed rpm : 450 guide sleeve 3.30 travel mm Tolerance mm : +- 0.20 Rated speed rpm : 700 guide sleeve travel mm : 6.10 Tolerance mm : + 0.20 Rated speed rpm : 1400 guide sleeve travel mm : 10.90 Tolerance mm : + 0.20 : 10.90 GUIDE SLEEVE POSITION control lever position degree : - 1 Rated speed rpm : 1330 Rack travel in mm : 16.50 Tolerance mm: \leftarrow 1.30 CONTROL LEVER control lever

tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.30 Rated speed rpm : 1250 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1380 Tolerance 1/min : +- 15 Rated speed rpm : 1500 LOW IDLE control lever position degree : 65.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 275 CRT mm min. : > 7.20 Testing: Rated speed rpm : 350 rack travel mm : 5.50 Tolerance mm : $\leftarrow 0.10$ Rated speed rpm : 423 TORQUE CONTROL Rated speed rpm : 1200 rack travel mm : 12.35 Tolerance mm : + 0.05 Rated speed rpm : 650 rack travel mm : 11.10 Tolerance mm : +- 0.20 Rated speed rpm : 550 rack travel mm : 11.00 Tolerance mm : \leftarrow 0.20 ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

position degree : 119.0

Rated speed rpm	: 1200	
Pressure hPa	: 1200	
rack travel mm		
Tolerance mm	: 12.35 : +- 0.05	
roterance min	. , - 0.07	
Rated speed rpm	: 1200	
Pressure hPa		
rack travel mm	7.90	
Tolerance mm	: + 0.20	
rocerance in	. 1- 0.20	
MEASUREMENT		
WE 430KEL EIAT		
Rated speed rpm	: 1200	
Nated Speed (pill	. 1200	
Pressure hPa	: 575	
rack travel mm	: 11.40	
Tolerance mm	: ← 0.20	
rocera:ice imii	. 1 - 0.20	
Pressure hPa	: 225	
rack travel mm		
	: 8.95 : +- 0.05	
Tolerance mm	0.05	
Start interlock		
Just Control		
Rated speed rpm	: > 100	
Rated speed rpm	: < 290	
Hacca speed (pill		
Check		
	• > 80	
speed 1/min	: > 80	
speed 1/min Check		
speed 1/min	: > 80 : < 300	
speed 1/min Check		
speed 1/min Check	: < 300	
speed 1/mir. Check speed 1/min	: < 300	
speed 1/mir. Check speed 1/min	: < 300	
speed 1/mir. Check speed 1/min	: < 300	
speed 1/min Check speed 1/min 	: < 300	
speed 1/mir. Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa	: < 300 RACTERISTICS	
speed 1/mir. Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm	: < 300 RACTERISTICS : 1200	
speed 1/mir. Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity	: < 300 RACTERISTICS : 1200 : 650	
speed 1/mir. Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: < 300 RACTERISTICS : 1200 : 650	
speed 1/mir. Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: < 300 RACTERISTICS : 1200 : 650 : 154.0	
speed 1/mir. Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: < 300 RACTERISTICS : 1200 : 650	
speed 1/mir. Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: < 300 RACTERISTICS : 1200 : 650 : 154.0 : + 3.0	
speed 1/mir. Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: < 300 RACTERISTICS : 1200 : 650 : 154.0	
speed 1/mir. Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: < 300 RACTERISTICS : 1200 : 650 : 154.0 : + 3.0	
speed 1/mir. Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: < 300 RACTERISTICS : 1200 : 650 : 154.0 : + 3.0 : + 6.0	
speed 1/mir. Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: < 300 RACTERISTICS : 1200 : 650 : 154.0 : + 3.0	
speed 1/mir. Check speed 1/mir. FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance	: < 300 RACTERISTICS : 1200 : 650 : 154.0 : + 3.0 : + 6.0 : 8.0	
speed 1/mir. Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: < 300 RACTERISTICS : 1200 : 650 : 154.0 : + 3.0 : + 6.0	
speed 1/mir. Check speed 1/mir. FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance	: < 300 RACTERISTICS : 1200 : 650 : 154.0 : + 3.0 : + 6.0 : 8.0	
speed 1/mir. Check speed 1/mir FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1001 strokes Check tolerance cm3/1001 strokes Check tolerance cm3/1001 strokes Check tolerance cm3/1001 strokes	: < 300 RACTERISTICS : 1200 : 650 : 154.0 : + 3.0 : + 6.0 : 8.0	
speed 1/min. Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1001 strokes Check tolerance cm3/1001 strokes Check tolerance cm3/1001 strokes Check tolerance cm3/1001 strokes Check tolerance cm3/1001 strokes Check tolerance cm3/1001 strokes Check tolerance cm3/1001 strokes Check tolerance cm3/1001 strokes	: < 300 RACTERISTICS : 1200 : 650 : 154.0 : + 3.0 : + 6.0 : 8.0	
speed 1/mir. Check speed 1/mir FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1001 strokes Check i erance cm3/1001s. Aneroid pressure hPa	: < 300 RACTERISTICS : 1200 : 650 : 154.0 : + 3.0 : + 6.0 : 8.0 : 12.0	
speed 1/mir. Check speed 1/mir. FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1001 strokes Check tolerance cm3/1001 strokes Check tolerance cm3/1001 strokes Check tolerance cm3/1001 strokes Check tolerance cm3/1001 strokes Check tolerance cm3/1001 strokes Check tolerance cm3/1001 strokes Check tolerance cm3/1001 strokes Check tolerance cm3/1001 strokes Check tolerance cm3/1001 strokes Check tolerance cm3/1001 strokes Check tolerance cm3/1001 strokes Check tolerance cm3/1001 strokes Check tolerance cm3/1001 strokes Check tolerance cm3/1001 strokes Check tolerance cm3/1002 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes	: < 300 RACTERISTICS : 1200 : 650 : 154.0 : + 3.0 : + 6.0 : 8.0	
speed 1/mir. Check speed 1/mir. FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1001 strokes	: < 300 RACTERISTICS : 1200 : 650 : 154.0 : + 3.0 : + 6.0 : 8.0 : 12.0 :	
speed 1/mir. Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes	: < 300 RACTERISTICS : 1200 : 650 : 154.0 : + 3.0 : + 6.0 : 8.0 : 12.0	
speed 1/mir. Check speed 1/mir. FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1001 strokes	: < 300 RACTERISTICS : 1200 : 650 : 154.0 : + 3.0 : + 6.0 : 8.0 : 12.0 :	

Check tolerance cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance cm3/1000s. : +- 25.0

LOW IDLE

Rack travel in mm : 5.50 Tolerance mm : +- 0.10

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 18.08.97 Test oil : ICO 4113

Combination No. : 0 402 736 860

Injection pump

Pump designation : PES6P110A120RS7214 EP type number : 0 402 716 805

Governor

Governer design. : RQV350...1200PA964

: -29K Governer no. : 0 421 875 430

Cust. part No. : 3282466

Customer-spec. information Customer : CDC : 6CTA-A : 187.0 Motor Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 1.5

Overflow quantity

min. l/h : 120 Tolerance l/h : + 5.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

2.0 x inside diameter : x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.40 Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 5.50 Tolerance : \leftarrow 0.50

Check

tolerance "NW : **←** 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm: 14.55 Tolerance mm : + 0.05 Rack travel in mm: 5.40 Tolerance mm : +- 0.10 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 1 Rated speed rpm : 1330 Rack travel in mm : 16.50 Tolerance mm : +- 1.30 CONTROL LEVER control lever position degree : 66.0 tolerance degree : +- 4.0 control lever position degree : 119.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.50 Rated speed rpm : 1250 Tolerance 1/min : ← 5 4.00 rack travel mm : Rated speed rpm : 1410 Tolerance 1/min : + 15 rack travel mm : 0.50
Tolerance mm : + 0.50
Rated speed rpm : 1500 LOW IDLE

control lever position degree : 15.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 275 CRT mm mir. :> 7.20Testing: Rated speed rpm : 350 rack travel mm : 5.40 Tolerance mm : $\leftarrow 0.10$ Rated speed rpm : 425 TORGUE CONTROL Rated speed rpm : 1200 rack travel mm : 14.55 Tolerance mm : + 0.05 Rated speed rpm : 650 rack travel mm : 11.50 Tolerance mm : + 0.20 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 1200
Pressure hPa : 1200
rack travel mm : 14.55
Tolerance mm : \leftarrow 0.05 Rated speed rpm : 1200 Pressure hPa : −
rack travel mm : 7.70
Tolerance mm : + 0.20 MEASUREMENT Rated speed rpm : 1200 Pressure hPa : 860 rack travel mm : 13.4 13.40 Tolerance mm : +- 0.20 Pressure hPa : 320 rack travel mm : 9.45 Tolerance mm : + 0.05

tolerance degree : +- 4.0

control lever

position degree : 65.0

Start interlock

Rated speed rpm : > 100 Rated speed rpm : < 290

Check

speed 1/min :> 80

Check

speed 1/min : < 300

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1200 Rated speed rpm : 650

Del. quantity

cm3/1000 strokes : 167.5

Tolerance

cm3/1000 strokes : \leftarrow 3.0

Check tolerance

cm3/1000s. : +- 6.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Aneroid pressure

hPa : -Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 91.5

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Del. quantity

cm3/1000 strokes : 155.0

Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance

cm3/1000s. : +- 25.0

LOW IDLE

Rack travel in mm: 5.40

D28

Tolerance mm : +- 0.10

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 18.08.97 Test oil : ISO 4113

Combination No. : C 402 746 608

Injection pump

Pump designation : PES6P120A320RS7359 EP type number : 0 412 726 925

Governor

Governer design. : RQ275/1050PA1275 Governer no. : 0 421 801 805

Cust. part No. : CCEP 5157A 66-222

Customer—spec. information

Customer : RENAULT V.I.

Motor : MIDRC62045 F/C41

Power KW : 152.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. *C : 40
Tolerance *C : + 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Overflow quantity min. L/h : 220 Tolerance L/h : + 10.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : ← 1.0

Prestroke mm : 4.70Tolerance mm : $\leftarrow 0.05$

Check

tolerance mm : +- 0.10

Rack travel in mm : 20.25Tolerance mm : +0.75

Firing order : 1-5- 3- 6- 2-

: 4

Pnasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance "NW : +- 0.75

Start of delivery mark

*NW after s.o.d. : -0.95

Tolerance : \leftarrow 0.50 Check

tolerance *NW : +- 0.75

Barrel no. :

CRT ZERO POSITION

Rack travel in mm Tolerance mm		+ Rated speed rpm : 1050 + guide sleeve	
		travel mm : 6.70	
BASIC SETTING	· · · · · · · · · · · · · · · · · · ·	Tolerance mm : +- 0.10	
	4050	Rated speed rpm : 648	
Rated speed rpm	: 1050	+ guide sleeve + travel mm : 6.18	
Del. quantity		Tolerance mm : +- 0.10	
cm3/1000 strokes	: 176.0	+	
Tolerance		_ + Rated speed rpm : 375 + guide sleeve	
cm3/1000 strokes	: +- 1.0	travel mm : 5.00	
		+ Tolerance mm : + 0.10	
Check tolerance		+	
cm3/1000s.	: + 4.0	+ Rated speed rpm : 450	
Caraad		_	
Spreed		travel mm : 6.00 Tolerance mm : +- 0.10	
Tolerance		Total alice liki) . To U. [U	
cm3/1000 strokes	: 5.0	Rated speed rpm : 1300	
		guide sleeve	
Check tolerance		+ travel mm : 11.50	
cm3/1000s.	: 9.0	† Tolerance mm : ← 0.50	
		- † Rated speed rpm : 873	
		+ guide sleeve	
Rated speed rpm	: 275	travel mm : 6.52	
		† Tolerance mm : +- 0.10	
Rack travel in mm		+	
Tolerance mm	: - 0.10	CHIEF OF ESTE BOOTETON	
Del. quantity cm3/1000 strokes	. 28.0	GUIDE SLEEVE POSITION	
Tolerance	: 25.0	Ī	
cm3/1000 strokes	· + 20	T control lever	
Check tolerance	2.0	position degree : 109	
cm3/1000s.	: ← 5.0	Rated speed rpm : 500	
Spreed		+	
Tolerance		+ Rack travel in mm : 20.00	
m3/1000 strokes	: 8.0	† Tolerance mm : + 0.80	
Check tolerance	40.0	†	
:m3/1000s.	: 12.0	+ FULL LOAD DELIVERY AT FULL LOAD S	STOR
(B) SETTING OF IN.	IECTION DUMP	+ Rated speed rpm : 1050	
NITH GOVERNOR	DECITOR FUMP	+ Rated speed rpm : 1050 + Aneroid pressure	
MITTE GOVERNACK		hPa : 1000	
		Del. quantity	
GUIDE SLEEVE TRAVE	EL	+ cm3/1000 strokes : 176.0	
D. L	1122	+ Tolerance	
Rated speed rpm	: 1122	+ cm3/1000 strokes : + 1.0	
guide sleeve travel mm	: 7.06	+ Check tolerance + cm3/1000s. : +- 4.0	
ravet mm Tolerance mm	: 7.00 : ← 0.15	+ Spreed : + 4.0	
Occi arice iiiii	. 0.17	Tolerance	
Rated speed rpm	: 275	+ cm3/1000 strokes : 5.0	
guide sleeve		+ Check tolerance	
travel mm	: 2.44	+ cm3/1000s. : 9.0	
Tolerance mm	: ← 0.20	+	
iolerance mm	: +- 0.20	+	

		† 2E
CONTROL LEVER		Rat
		+ Pre
control lever	274.0	+ rac
position degree tolerance degree	: 276.0 : +- 4.0	+ To
04750 00550		+ Rat
RATED SPEED	1 00	+ Pre
ack travel mm	: -1.00	+ La
ated speed rpm olerance 1/min	: 1115 : +- 5	† To
	7.70	+ ME/
eack travel mm Rated speed rpm	: -7.70 : 1205	Rat
olerance 1/min	: +- 15	+
	. 44.20	+ Pre
rack travel mm	: -11.20	† rac
olerance mm Rated speed rpm	: ← 0.50 : 1350	† To
State and the state of the stat		+ Pre
		+ rad
		+ To
OW IDLE		+ -
		† Sta
control lever		+ Ra
ousition degree	: 256.0	+ Ra
colerance degree	: +- 4.0	+
		+ Che
Setting point w/o	ut bumper spring	+ spe
Rated speed rpm	: 200	+ Che
RT mm min.	: < -4.20	<u> </u>
est must mitte	. \ -4.20	FUE
Testing:		1
Rated speed rpm	: 275	+ Ane
rack travel mm	: -6.10	+ hPa
Tolerance mm	: ← 0.10	+ Rat
		+ De
rack travel mm	: -9.70	+ <u>c</u> m
Rated speed rpm	: 365	+ To
Tolerance 1/min	: +- 20	+ cm
		+ Che
TORQUE CONTROL		I ciii.
Rated speed rpm	: 1050	+
7.a.a.d	. 400	+ And
Rated speed rpm	: 600	+ hPa
rack travel mm	: 0.80	+ Rat
Tolerance mm	: +- 0.10	+ De
		+ cm3
MICONTO/ALTITUDE		† To
ANEROID/ALTITUDE COMPENSATOR TEST		+ cm3 + Che
COMPENSATOR 1EST		T une

+	SETTING		
+			
+	Rated speed rpm	: 500 : 1000	
†	Pressure hPa		
+	rack travel mm	: 1.00	
+	Tolerance mm	: +- 0.10	
+			
+	Rated speed rpm	: 500	
+	Pressure hPa	: -	
+	rack travel mm	: -1.00	
+	Tolerance mm	: + 0.20	
+			
+	MEASUREMENT		
+			
+	Rated speed rpm	: 500	
+			
1	Pressure hPa	: 280	
1	rack travel mm	: 0.65	
1	Tolerance mm	: + 0.15	
1			
1	Pressure hPa	: 160	
1	rack travel mm	: -0.15	
1	Tolerance mm	: + 0.05	
1	rocci di lee liilli	0.05	
1			
Ι	Start interlock		
Ι	Start Miter totk		
Ι	Pated speed rom	: > 100	
T	Rated speed rpm	: > 100 : < 195	
T	Rated speed rpm	. \ 195	
T	Check		
T		: > 80	
T	speed 1/min	: > 80	
Ť	Check	245	
†	speed 1/min	: < 215	
†			
†	FUEL OCI TUEDY CUA	DACTEDICTICS	
T	FUEL DELIVERY CHA	KACIEKISIIUS	
I			
I	Aneroid pressure		
I	hPa	: 1000	
Ι	Rated speed rpm	: 600	
I	Del. quantity	. 000	
I	cm3/1000 strokes	: 193.0	
Ι	Tolerance	. 173.0	
T	cm3/1000 strokes	: +- 3.0	
T		. +- 5.0	
T	Check tolerance	. 4 0	
T	cm3/1000S.	: +- 6.0	
T			
T	Anamaid massacci	······································	
T	Aneroid pressure		
Ť	hPa		
		: 500	
†	Rated speed rpm		
Ŧ	Del. quantity		
+	Del. quantity cm3/1000 strokes	: 149.0	
† † †	Del. quantity cm3/1000 strokes Tolerance	: 149.0	
† + + +	Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes		
† † † † †	Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 149.0 : + 1.0	
† † † † †	Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 149.0	

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 155.0

Tolerance

cm3/1000 strokes : \leftarrow 15.0

Check tolerance

cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm : 275

Rack travel in mm : -6.10 Tolerance mm : + 0.10 Del. quantity

cm3/1000 strokes : 28.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : + 5.0

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 15.08.97 : ISO 4113

Combination No. : 0 402 746 844

Injection pump

Pump designation : PES6P12OA32ORS7162

EP type number : 0 412 726 819

Governor

Governer design. : RQ750PA836-2

Governer no. : 0 421 801 628

Cust. part No. :

Customer-spec. information Customer : PERKINS : 2006 TAG Mutor

Power KW

: 280.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

40 temp. °C : + 2.0 Tolerance °C

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 067

Outside diameter : 6.0

x inside diameter: 1.5 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.55 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in min : 10.50Tolerance mm : + 1.50

Firing order : 1-4-2-6-3-

Phasing : 0-60-120-180-240

: -300

: +- 0.30 Tolerance

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.10

Check

: **←** 0.75 tolerance °NW

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 13.05

Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes	: 380.0	travel mm : 11.50 Tolerance mm : +- 0.50
Tolerance cm3/1000 strokes	: +- 1.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s.	: +- 4.0	+ Rated speed rpm : 700
Spreed		+ Aneroid pressure + hPa : - + Del. quantity
Tolerance cm3/1000 strokes	: 5.0	- cm3/1000 strokes : 380.0 - Tolerance - cm3/1000 strokes : +- 1.0
Check tolerance cm3/1000s.	: 9.0	Check tolerance cm3/1000s. : +- 4.0 Spreed
Rated speed rpm	: 300	Tolerance cm3/1000 strokes : 5.0 Check tolerance
Del. quantity cm3/1000 strokes Tolerance		cm3/1000s. : 9.0
cm3/1000 strokes Check tolerance		CONTROL LEVER
cm3/1000s. Spreed Tolerance		control lever position degree : 89.0
cm3/1000 strokes Check tolerance cm3/1000s.	: 8.0 : 12.0	tolerance degree : +- 4.0
CM3/ 10003.	. 72.0	ASSEMBLY GOVERNOR SETTING
(E) SETTING OF IN WITH GOVERNOR	NECTION PUMP	Rated speed rpm : 750 rack travel mm : 12.00
GUIDE SLEEVE TRAV	/EL	Rated speed rpm : 784 Tolerance 1/min : +- 4
Rated speed rpm guide sleeve	: 757	+ rack travel mm : 4.00 + rack travel mm : 0.50
travel mm Tolerance mm	: 1.84 : +- 0.25	Tolerance mm : + 0.50 Rated speed rpm : 820
Rated speed rpm guide sleeve	: 930	Rated speed rpm: : 751
travel mm Tolerance mm	: 42.98 : ← 0.25	rack travel mm : 12.00 Rated speed rpm : 785
Rated speed rpm guide sleeve	: 820	Tolerance 1/min : +- 4 rack travel mm : 4.00
travel mm Tolerance mm	: 9.41 : + 0.25	rack travel mm : 0.50 Tolerance mm : + 0.50
Rated speed rpm guide sleeve		Rated speed rpm : 820
travel mm Tolerance mm	: 10.00 : ← 0.25	Rated speed rpm : 752 rack travel mm : 12.00
Rated speed rpm	: 880	12.00

E06

Rated speed rpm	: 786
Tolerance 1/min	: +- 4
rack travel mm	: 4.00
rack travel mm	: 0.50
Tolerance mm	: +- 0.50
Rated speed rpm	: 820
Rated speed rpm rack travel mm	
Rated speed rpm	: 787
Tolerance 1/min	: +- 4
rack travel mm	: 4.00
rack travel mm	: 0.50
Tolerance mm	: → 0.50
Rated speed rpm	: 820
Rated speed rpm rack travel mm	
Rated speed rpm	: 788
Tolerance 1/min	: + 4
rack travel mm	: 4.00
rack travel mm	: 0.50
Tolerance mm	: + 0.50
Rated speed rpm	: 820
Rated speed rpm rack travel mm	
Rated speed rpm Tolerance 1/min rack travel mm	
rack travel mm	: 0.50
Tolerance mm	: + 0.50
Rated speed rpm	: 820
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 13.05 : +- 0.05

Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
LOW IDLE	
Rated speed rpm	: 300
Del. quantity cm3/1000 strokes	: 41.0
Tolerance cm3/1000 strokes	: +- 3.0
Check tolerance cm3/1000s. Spreed	: +- 6.0
Tolerance cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0

STARTING FUEL DELIVERY

Rated speed rpm : 100

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 20.08.97 Edition : ISO 4113 Test oil

Combination No. : F 000 409 102

Injection pump

Pump designation : PES6P120A720LS7257

: -11 EP type number : F 000 400 201

Governor

Governer design. : RQV300...950PA1242

Governer no. : 9 420 080 387

Cust. part No. : 0280743302

Customer-spec. information

Customer : MBB

Motor : OM 447LA Euro II

Power KW : 264.8

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.3

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 25.0 Tolerance bar : +- 1.0

Prestroke mm 4.70 : +- 0.05 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm : 21.00

: 6-2-4-1-5-: 3 Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

: +- 0.75 tolerance °NW

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm : 13.40 Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 276.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

: +- 4.0 cm3/1000s.

Spreed

E08

Tolerance cm3/1000 strokes :	5.0	control lever position degree : - 1
Check tolerance cm3/1000s.	9.0	Rated speed rpm : 1120
	<u> </u>	Rack travel in mm : 16.50 Tolerance mm : + 1.30
Rated speed rpm : 3	300	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm :	5.00	TOLL LOAD DELIVERY AT TOLL LOAD STOP
Tolerance mm : +-	0.10	Rated speed rpm : 600
Del. quantity cm3/1000 strokes :	7.5	Aneroid pressure hPa : 1300
Tolerance	1.3	Del. quantity
cm3/1000 strokes : +-	3.0	cm3/1000 strokes : 276.0
Check tolerance cm3/1000s. :	6.0	Tolerance cm3/1000 strokes : +- 1.0
Spreed	+	Check tolerance
Tolerance cm3/1000 strokes :		cm3/1000s. : +- 4.0
Check tolerance	0.0	Spreed Tolerance
cm3/1000s. :	12.0	cm3/1000 strokes : 5.0
	†	Check tolerance cm3/1000s. : 9.0
(B) SETTING OF INJECTION WITH GOVERNOR	PUMP	
		CONTROL LEVER
GUIDE SLEEVE TRAVEL	†	and the Laws of
Rated speed rpm : 7	ron I	control lever position degree : 115.0
guide sleeve	+	tolerance degree : +- 4.0
	4.55	DATES COSES
Tolerance mm : +-	1.25	RATED SPEED rack travel mm : 12.10
Rated speed rpm : 10)50 +	Rated speed rpm : 1025
guide sleeve	7 70	Tolerance 1/min : +- 5
travel mm : +-	7.70 0.10	rack travel mm : 4.00
	+	Rated speed rpm : 1135
Rated speed rpm : 3	500	Tolerance 1/min : +- 15
guide sleeve travel mm :	0.75	rack travel mm : 0.50
	0.25	Tolerance mm : +- 0.50
Rated speed rpm : 5	500	Rated speed rpm : 1230
guide sleeve	7 /5	
travel mm : +-	3.45	
	+	LOW IDLE
Rated speed rpm : 11	65	
guide sleeve travel mm :	9.55	control lever
Tolerance mm : +-		position degree : 78.0 tolerance degree : +- 4.0
GUIDE SLEEVE POSITION		Setting point w/out bumper spring
	-	Rated speed rpm : 100

_		+ Rated speed rpm : < 220
CRT mm min.	: > 8.00	Charl
T •		+ Check
Testing:		+ speed 1/min : > 80
D-A 1 1	700	+ Check
Rated speed rpm rack travel mm Tolerance mm	: 300	+ speed 1/min : < 240
ick travet mm	: 5.00	†
lerance mm	: +- 0.10	
	70.5	<pre>+ FUEL DELIVERY CHARACTERISTICS</pre>
ated speed rpm	: 325	†
		† Aneroid pressure
RQUE CONTROL		hPa : 1300 + Rated speed rpm : 950
ited speed rpm	: 600	† Rated speed rpm : 950
ick travel mm	: 13.40	† Del. quantity
ck travel mm lerance mm	: ← 0.05	+ cm3/1000 strokes : 254.0
		† Tolerance
ated speed rpm ack travel mm plerance mm	: 950	+ cm3/1000 strokes : +- 2.0
ick travel mm	: 13.20	+ Check tolerance + cm3/1000s. : +- 5.0
lerance mm	: +- 0.05	+ cm3/1000s. : +- 5.0
		+ Spreed
ited speed rpm	: 750	+ Tolerance
ick travel mm	: 13.40	+ cm3/1000 strakes : 8.0
ck travel mm lerance mm	: +- 0.05	- Check tolerance
		+ cm3/1000s. : 12.0
ted speed rpm	: 900	hPa : 1300 Rated speed rpm : 950 Del. quantity cm3/1000 strokes : 254.0 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : 1300 Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 268.5 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 5.0 Spreed
ted speed rpm ck travel mm lerance mm	: 13.25	
lerance mm	: ← 0.05	Aneroid pressure
		hPa : 1300
		hPa : 1300 Rated speed rpm : 750
EROID/ALTITUDE		+ Del. quantity
MPENSATOR TEST		cm3/1000 strokes : 268.5
CITORITOR TEOT		Tolerance
		cm3/1000 strokes : +- 2.0
TTING		Check tolerance
11110		+ cm3/1000s. : +- 5.0
ted speed rom	• 500	+ Spreed
ren sheen Lhu	. 1700 • 1700	Tolerance
ted speed rpm essure hPa ck travel nm	: 13.40	- cm3/i000 strokes : 8.0
Lanance To	. 13,40 . +- 0.05	Check tolerance
lerance mm	: +- 0.05	
لدمميرم لمحج	. 500	+ cm3/1000s. : 12.0
ted speed rpm		
essure hPa	: -	Ananaid massacra
ACHOEMENT		+ Aneroid pressure
ASUREMENT		+ hPa : -
A. 1	. ree	Rated speed rpm : 500
ted speed rpm	: 500	Del. quantity
	A==	+ cm3/1000 strokes : 139.5
essure hPa	: 850	+ Tolerance
ck travel mm		+ cm3/1000 strokes : +- 1.0
lerance mm	: ← 0.15	+ Check tolerance
		+ cm3/1000s. : +- 4.0
essure hPa	: 550	Spreed
ck travel mm	: 0.75	+ Tolerance
lerance mm	: ← 0.10	+ cm3/1000 strokes : 5.0
		+ Check tolerance
		+ cm3/1000s. : 9.0
art interlock		+
Service Services		
ited speed rpm	: > 100	1
area opeca ipm		1

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 247.5

Tolerance

cm3/1000 strokes : +- 10.0

Check tolerance

cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm : 300

Rack travel in mm: 5.00
Tolerance mm: + 0.10
Del. quantity

cm3/1000 strokes : 7.5

Tolerance

cm3/1000 strokes : \leftarrow 3.0

Check tolerance

cm3/1000s. : +- 6.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 20.08.97 : ISO 4113

Combination No. : F 000 409 206

Injection pump

Pump designation : PES6A100D120RS2868

EP type number : 9 400 084 037

Governor

Governer design. : RSV435...1200A0C945R

Governer no. : F 000 420 701

Cust. part No. : 3927763

Customer-spec. information Customer : CUMMINS : 69T

Motor Power KW

: 81.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

: 208.5

Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure tar : 26.0 Tolerance bar : + 1.0

Prestroke mm : +-2.85 : +- 0.95

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : ← 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 6.75 Tolerance : +- 0.10

Check

tolerance °NW : +- 0.23

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm : 8.80

Tolerance mm : +- 0.05

Del. quantity +	Aneroid pressure
cm3/1000 strokes : 76.0	hPa : -
	Del. quantity
Tolerance	cm3/1000 strokes : 76.0
cm3/1000 strokes : + 1.0	Tolerance
Chool, tolorunos	cm3/1000 strokes : + 1.0
Check tolerance cm3/1000s. : +- 3.0	Check tolerance cm3/1000S. : +- 3.0
	cm3/1000s. : +- 3.0 Spreed
Spreed	Tolerance
T .	cm3/1000 strokes : 3,5
Tolerance	Check tolerance
cm3/1000 strokes : 3.5	cm3/1000s. : 8.0
+	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Check tolerance	
cm3/1000s. : 8.0	
	CONTROL LEVER
<u> </u>	
+	control lever
Rated speed rpm : 435	position degree : 99.0
	tolerance degree : +- 4.0
Rack travel in mm : 4.80	RATED SPEED
Del. quantity	rack travel mm : 7.80
cm3/1000 strokes : 10.0	Rated speed rpm : 1245
Tolerance	Tolerance 1/min : +- 5
cm3/1000 strokes : + 2.0	Total allow them to the second
Check tolerance	rack travel mm : 4.00
cm3/1000s. : + 4.5	Rated speed rpm : 1335
Spreed	Tolerance 1/min : +- 15
Tolerance	
cm3/1000 strokes : 5.5	rack travel mm : 0.85
Check tolerance	Tolerance mm : +- 0.55
cm3/1000s. : 9.0	Rated speed rpm : 1400
†	
(C) SETTING OF THE SECTION DUMP	
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	
WITH GOVERNOR I	LOW IDLE
1	LOW IDE
GUIDE SLEEVE POSITION	control lever
+	position degree : 83.0
+	tolerance degree : +- 4.0
control lever	
position degree : - 3	Setting point w/out bumper spring
Rated speed rpm : 800	Dated around ann 1 /75
Rack travel in mm : 0.50	Rated speed rpm : 435 rack travel mm : 4.30
Tolerance mm : + 0.20	Tolerance mm : +- 0.10
1 O.20	Total artee min
governor spring	Rated speed rpm : 100
pre-tension +	The second secon
click setting x : 2.75	CRT mm min. : > 20.00
-	
	Testing:
FULL LOAD DELIVERY AT FULL LOAD STOP	
+	Rated speed rpm : 435
Rated speed rpm : 1200 +	rack travel mm : 4.80
+	Tolerance mm : +- 0.10

rack travel mm	: 2.00
Rated speed rpm	: 580
Tolerance 1/min	: +- 30
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1200 : 8.80 : +- 0.05
Rated speed rpm	: 700
rack travel mm	: 9.05
Tolerance mm	: +- 0.05
Rated speed rpm	: 850
rack travel mm	: 9.05
Tolerance mm	: + 0.05
Rated speed rpm	: 1050
rack travel mm	: 8.80
Tolerance mm	: + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure			
hPa	:		-
Rated speed rpm	:		700
Del. quantity			
cm3/1000 strokes	:		80.5
Tolerance			
cm3/1000 strokes	:	+-	2.0
Check tolerance			
cm3/1000s.	:	+-	4.0

STARTING FUEL DELIVERY

Rated speed rpm	: 100
rack travel mm	: 20.00
Tolerance mm	: +- 1.00
Del. quantity	
cm3/1000 strokes	: 164.0
Tolerance	
cm3/1000 strokes	: +- 8.0
Check tolerance	
cm3/1000S.	: +- 11.0

LOW IDLE

Rated speed rpm : 435

Rack travel in mm Tolerance mm Del. quantity	:	+-	4.80 0.10
cm3/1000 strokes Tolerance	:		10.0
cm3/1000 strokes	:	+-	2.0
Check tolerance cm3/1000s.	:	+	4.5
Spreed Tolerance			
cm3/1000 strokes Check tolerance	:		5.5
cm3/1000s.	:		9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 25.08.97 Test oil : ISO 4113

: 9 407 083 279 Combination No.

Injection pump

Pump designation : PES6A80D320RS1271 EP type number : 9 400 083 058

Governor

Governer design. : RSV350...1400A2C2179

: 9 420 083 281 Governer no.

Cust. part No. :

Customer-spec. information Customer : MWM : D229-6 Motor

: 100.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

173.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 003

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm 2.25 : +- C.05 Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-

: 4

: 0-66-126-180-240 Phasing

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Beginning of delivery differende

and maximum rack

10.50 travel Tolerance mm : **←** 1.50 Difference ° CS : 4.50

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm: 10.25 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 60.0

Tolerance	+	Tolerance
cm3/1000 strokes	: + 0.5 +	cm3/1000 strokes : +- 0.5
		Check tolerance
Check tolerance	+	cm3/1000s. : +- 2.0
cm3/1000S.	: + 2.0 +	Spreed
	 +	Tolerance
Spreed	+	cm3/1000 strokes : 2.5
	+	Check tolerance
Tolerance	+	cm3/1000s. : 4.0
cm3/1000 strokes	: 2.5	
Check tolerance	<u> </u>	OOUTDOL 1 SUED
cm3/1000s.	: 4.0	CONTROL LEVER
		control lever
	Ţ	position degree : 97.0
Rated speed rpm	. 350 I	tolerance degree : +- 4.0
vared speed thin	· 330	toterance degree : +- 4.0
Rack travel in mm	· 10.70 I	RATED SPEED
Tolerance mm	· · · · · · · · · · · · · · · · · · ·	rack travel mm : 9.20
Del. quantity	I	Rated speed rpm : 1435
cm3/1000 strokes	: 46.5	Tolerance 1/min : +- 5
Tolerance		TO COT GINGS TO MITTER TO THE STATE OF THE S
cm3/1000 strokes	: +- 1.5	rack travel mm : 4.00
Check tolerance		Rated speed rpm : 1505
cm3/1000s.	: +- 3.5	Tolerance 1/min : +- 15
Spreed	1	
Tolerance	 	rack travel mm : 0.85
cm3/1000 strokes	: 4.0	Tolerance mm : +- 0.55
Check tolerance	+	Rated speed rpm : 1650
cm3/1000s.	: 6.0	•
	+	
	+	
(B) SETTING OF IN	JECTION PUMP	
WITH GOVERNOR	†	LOW IDLE
	1	
		control lever
GUIDE SLEEVE POSI	TION	position degree : 66.0
00100 000000 7 001	1	tolerance degree : +- 4.0
	1	total and degree
control lever	<u> </u>	Setting point w/out bumper spring
position degree	: - 3	
Rated speed rpm	: 800	Rated speed rpm : 350
,	}	rack travel mm : 10.20
Rack travel in mm	·: 0.65	Tolerance mm : +- 0.10
Tolerance mm		
	+	Rated speed rpm : 100
governor spring	+	
pre-tension	+	CRT mm min. $: > 19.00$
click setting x	: 4.00 +	-
	†	Testing:
FINE LOAD AT THE	V AT 5101 1 222 2722	Dahad assault a second 250
FULL LOAD DELIVER	Y AT FULL LOAD STOP	Rated speed rpm : 350
0.4-1	1/00	rack travel mm : 10.70
Rated speed rpm		Tolerance mm : \leftarrow 0.10
Aneroid pressure	†	2.00
hPa	: - +	rack travel mm : 2.00 Rated speed rpm : 640
Del. quantity	t	
cm3/1000 strokes	: 60.0 +	Tolerance 1/min : +- 30

TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1400 : 10.25 : ← 0.05
Rated speed rpm	: 500
rack travel mm	: 10.75
Tolerance mm	: ← 0.05
Rated speed rpm	: 800
rack travel mm	: 10.55
Tolerance mm	: + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure			
hPa	:		-
Rated speed rpm	:		500
Del. quantity			
cm3/1000 strokes	:		50.5
Tolerance			
cm3/1000 strokes	:	+-	1.5
Check tolerance			
cm3/1000s.	:	+-	3.0

	-
	800
	53.5
- -	1.5
+-	3.0
	<u>+-</u>

STARTING FUEL DELIVERY

Rated speed rpm	:		100
rack travel mm	;		20.00
Tolerance mm	:	+	1.00

LOW IDLE

Rated speed rpm	:	350
Rack travel in mm Tolerance mm		10.70 0.10

Del. quantity		
cm3/1000 strokes	:	46.5
Tolerance		
cm3/1000 strokes	: +-	1.5
Check tolerance		
cm3/1000S.	: +-	3.5
Spreed		
Tolerance		
cm3/1000 strokes	:	4.0
Check tolerance		
cm3/1000s.	:	6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 03.09.97 : ISO 4113

Combination No. : F 000 409 204

Injection pump

Pump designation : PES6A95D410RS2812 EP type number : 9 400 084 028

Governor

Governer design. : RQV350...1300AB1327L

Governer no. : F 000 420 303

Cust. part No. :

Customer-spec. information

Customer : MWM

Motor

: 6.10 TCA EURO I

Power KW

: 152.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

: 173.5

Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

: 2.85 : + 0.05 Prestroke mm Toterance nim

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 13.15 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 111.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.

: +- 3.0

Tolerance cm3/1000 strokes	; 3.5	control lever position degree : - 1
Check tolerance cm3/1000S.	: 8.0	Rated speed rpm : 1480
		Rack travel in mm : 16.50 Tolerance mm : +- 1.30
Rated speed rpm	: 350	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in m		+
Tolerance mm	: +- 0.10	Rated speed rom : 1300
Del. quantity cm3/1000 strokes	. 16.0	+ Aneroid pressure + hPa : 900
Tolerance	. 15.0	T Mra : 900 + Del. quantity
cm3/1000 strokes	: +- 2.0	+ cm3/1000 strokes : 111.0
Check tolerance		Tolerance
cni3/1000s.	: +- 4.5	cm3/1000 strokes : +- 1.0 Check tolerance
Spreed Tolerance		+ cm3/1000s. : +- 3.0
cm3/1000 strokes	; 5.5	Spreed
Check tolerance		† Tolerance
cm3/1G00S.	: 9.0	cm3/1000 strokes : 3.5 Check tolerance
(5) 05-5110 05 71		+ cm3/1000s. : 8.0
(B) SETTING OF II WITH GOVERNOR	MIECTION PUMP	<u> </u>
		CONTROL LEVER
GUIDE SLEEVE TRAY	VEL	†
Rated speed rpm	: 800	<pre>+ control lever + position degree : 113.0</pre>
guide sleeve		tolerance degree : +- 4.0
travel nm	: 3.95	+
Tolerance mm	: +- 0.25	+ RATED SPEED + rack travel mm : 12.10
Rated speed rpm	: 1350	Rated speed rpm : 1360
guide sleeve		+ Tolerance 1/min : +- 5
travel mm		†
Tolerance mm	: +- 0.10	+ rack travel mm : 4.00 + Rated speed rpm : 1545
Rated speed rpm	: 300	Tolerance 1/min : +- 15
guide sleeve		+
travel mm	: 1.05	rack travel mm : 0.50
Tolerance mm	: +- 0.25	Tolerance mm : +- 0.50 Rated speed rpm : 1730
Rated speed rpm	: 550	+
guide sleeve		+
travel mm Tolerance mm	: 2.75 : +- 0.25	†
IOTEL GLICE IIMI	. 1 0.63	LOW IDLE
Rated speed rpm	: 1500	+
guide sleeve		†
travel mm Tolerance mm	: 8.55 : + 0.25	+ control lever + position degree : 68.0
TOTEL ALICE IIII	. — 0.63	tolerance degree : +- 4.0
GUIDE SLEEVE POS	ITION	Setting point w/out bumper spring

Rated speed rpm : 100

CRT mm min.	: > 8.50		
Testing:		FUEL DELIVERY CH	ARACTERISTICS
_	750		
Rated speed rpm		+ Aneroid pressure	
rack travel mm	: 0.40	+ hPa	: 900
Tolerance mm	: + 0.10	+ Rated speed rpm	
	700	+ Del. quantity	
Rated speed rpm	: 390	cm3/1000 strokes	: 109.0
		† Tolerance	
TORQUE CONTROL		+ Check tolerance	
Rated speed rpm	: 1300	+ cm3/1000s.	: +- 4.0
rack travel mm	: 13.15	Spreed	
rack travel mm Tolerance mm	· +- 0.05	Tolerance	
rocci arroc imir	. 0.03	cm3/1000 strokes	. 30
Rated speed rpm	. 200	Check tolerance	
naceu speed i pili	. 17 15		
rack travel mm	; (3,13	+ cm3/1000s.	: 0.0
Tolerance mm	: +- 0.05	†	
		1	
AMERICAN /ALTERIA		Aneroid pressure	
ANEROID/ALTITUDE		+ hPa	: -
COMPENSATOR TEST		+ nPa + Rated speed rpm	: 500
		+ Del. quantity	
		+ cm3/1000 strokes	: 52.0
SETTING		+ Tolerance	
		+ cm3/1000 strokes	: +- 1.0
Rated speed rpm	: 500	+ Check tolerance	
Pressure hPa	900	- cm3/1000s.	: 30
rack travel mm	: 13.15	Spreed	
Tolerance mm		Tolerance	
TO CEL BITCE THIS	0.05	cm3/1000 strokes	. 75
Data di anna di anna	. 600	1	
Rated speed rpm		Check tolerance	
Pressure hPa	: -	+ cm3/1000s.	: 8.0
MEASUREMENT		Ī	
HEASONEHENT		Ī	
Rated speed rpm	: 500	STARTING FUEL DE	LIVERY
Pressure hPa	: 350	Rated speed rpm	: 100
rack travel mm	: 2.50	rack travel mm	: 20.00
Tolerance mm	: +- 0.10	Tolerance mm	: +- 1.00
Toter arice illiii	0.10	+ Del. quantity	. 455 1.00
Danas	. 200		. 4// 5
Pressure hPa	: 200		: 146.5
rack travel mm	: 1.10	Tolerance	
Tolerance mm	: +- 0.05	+ cm3/1000 strokes	: +- 8.0
		+ Check tolerance	
			: +- 11.0
Start interlock		+	
	400	†	
Rated speed rpm		†	
Rated speed rpm	: < 250		
		+ LOW IDLE	
Check		†	
speed 1/min	: > 80	+ Rated speed rpm	: 350
Check		+	
speed 1/min	: < 270	+ Rack travel in m	
		+ Tolerance mm	: +- 0.10
		1	

Del. quantity			
cm3/1000 strokes	:	16.0	
Tolerance			
cm3/1000 strokes	: +-	2.0	
Check tolerance			
cm3/1000s.	: +-	4.5	
Spreed			
Tolerance			
cm3/1000 strokes	:	5.5	
Check tolerance			
cm3/1000s.	:	9.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 02.09.97 : ISO 4113

Combination No. : 0 400 844 047

Injection pump

Pump designation : PES4A90D410RS2294 EP type number : 0 410 894 011

Governor

Governer design. : RQV300...1425AB740L

Governer no. : 0 420 212 037

Cust. part No. :

Customer-spec. information Customer : MB-NFZ : OM 314 Motor : 62.5 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 1.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quar.t.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.20 Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolarance mm : ← 1.50

Firing order : 1-3-4-2

: 0-90-180-270 : +- 0.50 Phasing

Tolerance

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 9.70 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 63.0

Tolerance

cm3/1000 strokes : \leftarrow 0.5

Check tolerance : +- 2.5 cm3/1000s.

Spreed

Tolerance

cm3/1000 strokes : 3.0

0		Rated speed rpm : 1420
Check tolerance		†
cm3/1000s.	: 4.5	Rack travel in mm : 16.50
		+ Tolerance mm : ← 1.30
	•	
Rated speed rpm	: 300	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm	. 7.70	Dotted around annual 1/00
		Rated speed rpm : 1400
Tolerance mm	: + 0.10	Aneroid pressure
Del. quantity cm3/1000 strokes	. 12.0	+ hPa : -
	: 12.0	Del. quantity
Tolerance		cm3/1000 strokes : 63.0
cm3/1000 strokes	; 	Tolerance
Check tolerance		cm3/1000 strokes : +- 0.5
cm3/1000s.	: +- 5.0	Check tolerance
Spreed	•	cm3/1000s. : +- 2.5
Tolerance		Spreed
cm3/1000 strokes	: 2.0	Tolerance
Check tolerance		cm3/1000 strokes : 3.0
cm3/1000s.	: 4.0	Check tolerance
	•	+ cm3/1000s. : 4.5
453		†
(B) SETTING OF IN. WITH GOVERNOR	JECTION PUMP	†
MILL GOVERNOR		CONTROL LEVER
		+
GUIDE SLEEVE TRAVE	EL ·	control lever
		position degree : 118.0
Rated speed rpm	: 550	tolerance degree : +- 4.0
guide sleeve		1
travel mm	: 2.85	RATED SPEED
Tolerance mm	: + 0.15	rack travel mm : 8.70
		Rated speed rpm : 1460
Rated speed rpm	: 1460	Tolerance 1/min : +- 5
guide sleeve		
travel mm	: 8.50	rack travel mm : 4.00
Tolerance mm	: +- 0.10	Rated speed rpm : 1550
		Tolerance 1/min : + 15
Rated speed rpm	: 950	1000 0000 00000000000000000000000000000
guide sleeve		rack travel mm : 0.50
travel mm	: 5.35	Tolerance mm : +- 0.50
Tolerance mm	: +- 0.15	Rated speed rpm : 1700
TOTAL GLICE WIT	. 0.19	A Macca Speed (pill . 1700
Rated speed rpm	: 775	1
guide sleeve		1
travel mm	: 4.35	
Tolerance mm	: +- 0.25	LOW IDLE
TOTAL GITTE UMI	. J.25	+
Rated speed rpm	: 300	+
guide sleeve		control lever
travel mm	: 0.95	position degree : 70.0
Tolerance mm	: 0.25	tolerance degree : +- 4.0
		†
GUIDE SLEEVE POSIT	TION	+ Setting point w/out bumper spring
GOIDE SEELNE LOST	I TOIN .	T Rated speed rpm : 100
	•	+ Rated speed rpm : 100 L
control lever		T
position degree	: - 1	
hosition deduce	• •	T

Testing:

Rated speed rpm : 300 rack travel mm : 7.30Tolerance mm : + 0.10

Rated speed rpm : 445

TORQUE CONTROL

Rated speed rpm : 1400 rack travel mm : 9.70 Tolerance mm : +- 0.05

Start interlock

Rated speed rpm : > 100 Rated speed rpm : < 220

Check

speed 1/min : > 80

Check

speed 1/min : < 240

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 14.00 Folerance mm : +--- 0.30 Del. quantity

cm3/1000 strokes : 76.0 Tolerance

cm3/1000 strokes : \leftarrow 5.0

Check tolerance

cm3/1000s. : +- 8.0

LOW IDLE

Rated speed rpm : 300

Rack travel in mm: 7.30 Tolerance mm : \leftarrow 0.10

Del. quantity

cm3/1000 strokes : 12.0

Tolerance

cm3/1000 strokes : +-3.0 Check tolerance 5.0

: +--

cm3/1000s. Spreed

Tolerance

cm3/1000 strokes : 2.0

Check tolerance cm3/1000s. : 4.0

End of test specification sheet

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Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 02,09,97 : ISO 4113

Combination No. : 0 400 846 231

Injection pump

Pump designation : PES6A9OD410RS2293 EP type number : 0 410 896 031

Governor

Governer design. : RQV300...1425AB740L

Governer no. : 0 420 212 037

Cust. part No. :

Customer-spec. information

Customer : MB:-NFZ

Motor Power KW

: 0M352 : 95.6

TEST BENCH REQUIREMENTS

Inlet line : 1.2

Test oil inlet

temp. °C 40 Tolerance *C : + 2.0

Overflow valve : 1 419 922 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5

Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.1 Tolerance bar : +- 1.0

Prestroke mm : 2.00 Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : - 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 9.70 Tolerance mm : \leftarrow 0.07

Del. quantity

cm3/1000 strokes : 62.0

Tolerance

cm3/1000 strokes : \leftarrow 0.5

Check tolerance

cm3/1000s. : **←** 2.5

Tolerance cm3/1000 strokes	: 3.0	control lever position degree : - 1
Check tolerance cm3/1000s.	: 4.5	Rated speed rpm : 1420
		Rack travel in mm : 16.50 Tolerance mm : +- 1.30
Rated speed rpm	: 300	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in m	m: 7.60	TOLE EURO DECIVERY AT FOLE EURO STOP
Tolerance mm		Rated speed rpm : 1400
Del. quantity cm3/1000 strokes	. 12.0	+ Aneroid pressure - hPa : -
Tolerance	. 12.0	T Ora : - Del. quantity
cm3/1000 strokes		cm3/1000 strokes : 62.0
Check tolerance cm3/1000s.		Tolerance cm3/1000 strokes : +- 0.5
Spreed		Check tolerance
Tolerance		+ cm3/1000s. : +- 2.5
cm3/1000 strokes Check tolerance	: 2.0	Spreed Tolerance
cm3/1000s.	: 4.0	+ cm3/1000 strokes : 3.0
- · · · · · · · · · · · · · · · · · · ·		Check tolerance
(B) SETTING OF I		cm3/1000s. : 4.5
GUIDE SLEEVE TRA	VEL	CONTROL LEVER
Data	. 550	control lever
Rated speed rpm guide sleeve	: 330	position degree : 114.0 tolerance degree : +- 4.0
travel mm	: 2.85	+
Tolerance mm	: +- 0.15	RATED SPEED
Rated speed rpm	• 1/40	rack travel mm : 8.70 Rated speed rpm : 1460
guide sleeve	. 1400	Tolerance 1/min : +- 5
travel mm		+
Tolerance mm	: +- 0.10	rack travel mm : 4.00
Rated speed rpm	: 950	+ Rated speed rpm : 1550 + Tolerance 1/min : + 15
guide sleeve	. ,,,,,	Tocci ance 17 min
travel mm	: 5.35	rack travel mm : 0.50
Tolerance mm	: + 0.15	Tolerance mm : + 0.50 Rated speed rpm : 1700
Rated speed rpm	: 775	The special pill the sp
guide sleeve travel mm	: 4.35	Ţ
Tolerance mm	: +- 0.25	
Rated speed rpm	: 300	LOW IDLE
guide sleeve	. 0.05	tontrol lever
travel mm Tolerance mm	: 0.95 : +- 0.25	position degree : 68.0 tolerance degree : +- 4.0
GUIDE SLEEVE POS	ITION	Setting point w/out bumper spring
		Rated speed rpm : 100

CRT mm min. : > 9.10 Testina: Rated speed rpm 300 rack travel mm : 7.60 : **←** 0.10 Tolerance mm Rated speed rpm : 445 TORGISE CONTROL Rated speed rpm : 1400 rack travel mm : 9.70 Tolerance mm : + 0.07 Start interlock Rated speed rpm : > 100 Rated speed rpm : < 220 Check speed 1/min :> 80 Check speed 1/min : < 240 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 14.10 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 76.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance : ← 8.0 cm3/1000s. LOW IDLE 300 Rated speed rpm : Rack travel in mm : 7,60 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : \leftarrow 3.0 Check tolerance : **←** 5.0 cm3/1000s.

Tolerance cm3/1000 strokes : 2.0 Check tolerance cm3/1000s. : 4.0

End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 02.09.97 : ISO 4113

Combination No. : 0 400 846 559

Injection pump

Pump designation : PES6A90D410RS2710 EP type number : 0 410 896 082

Governor

Governer design. : RQV300...1400AB1065

: -9L

Governer no.

: 0 420 212 202

Cust. part No. :

Customer-spec. information. Customer : MB-NF7 : OM 366 Motor Power KW : 92.0

TEST BENCH REQUIREMENTS

: 2.3 Inlet line

Test oil inlet

temp. °C 40 Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

173.5 Tolerance bar : **←** 1.5

: 1 680 750 015 Test lines

Outside diameter : 6.0

x inside diameter: 1.5 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 2.30 : **←** 0.05 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 : **←** 1.50 Tolerance mm

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

Tolerance : **←** 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 10.35 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 59.5

Tolerance

cm3/1000 strokes : +-0.5

Check tolerance cm3/1000s.

: +-2.5

Tolerance - cm3/1000 strokes : 3.0 -	
Check tolerance	CONTROL LEVER
cm3/1000s, : 7.0 -	control lever position degree : 109.0 tolerance degree : +- 6.0
Rated speed rpm : 300	RATED SPEED : 9.30
Rack travel in mm: 8.80 - Tolerance mm: + 0.10 -	Rated speed rpm : 1445 Tolerance 1/min : +- 5
Del. quantity cm3/1000 strokes : 12.0 - Tolerance -	rack travel mm : 4.00 Rated speed rpm : 1555
cm3/1000 strokes : +- 2.0 Check tolerance	Tolerance 1/min : +- 15
cm3/1000s. : +- 4.0 Spreed	rack travel mm : 0.50 Tolerance mm : + 0.50
Tolerance - cm3/1000 strokes : 4.5 - Check tolerance -	Rated speed rpm : 1650
cm3/1000s. : 7.0 -	
(B) SETTING OF INJECTION PUMP - WITH GOVERNOR -	LOW IDLE
-	control lever position degree : 73.0
GUIDE SLEEVE POSITION -	tolerance degree : +- 6.0 Setting point w/out bumper spring
control lever	Rated speed rpm : 100
position degree : - 1 Rated speed rpm : 1500	CRT mm min. : > 10.30
Rack travel in mm : 16.50 - Tolerance mm : +- 1.30 -	Testing:
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 300 rack travel mm : 8.80 Tolerance mm : + 0.10
Rated speed rpm : 1400 - Aneroid pressure	Rated speed rpm : 625
hPa : Del. quantity - cm3/1000 strokes : 59.5 -	TORQUE CONTROL Rated speed rpm : 1400
Tolerance - cm3/1000 strokes : + 0.5 - Check tolerance -	rack travel mm : 10.35 Tolerance mm : +- 0.05
cm3/1000s. : + 2.5 - Spreed - Tolerance -	Rated speed rpm : 500 rack travel mm : 11.40 Tolerance mm : + 0.05
cm3/1000 strokes : 3.0 - Check tolerance - cm3/1000s. : 7.0 - Check tolerance - cm3/1000s.	Rated speed rpm : 750 rack travel mm : 11.10 Tolerance mm : +- 0.10
. -	Rated speed rpm : 1100

rack travel mm Tolerance mm	-	10.40 0.15	
Start interlock			
Rated speed rpm Rated speed rpm	: >	100 220	
Check speed 1/min Check	; >	80	
speed 1/min	; <	240	

Aneroid pressure			
hPa	:		-
Rated speed rpm	:		500
Del. quantity			
cm3,1000 strokes	:		46.0
Tolerance			
cm3/1000 strokes	:	+-	1.5
Check tolerance			
cm3/1000s.	:	+-	3.5

Aneroid pressure hPa Rated speed rpm	:		- 750
Del. quantity cm3/1000 strokes Tolerance	;		49.0
cm3/1000 strokes Check tolerance	:	+-	1.5
cm3/1000s.	:	+-	3.5

STARTING FUEL DELIVERY

Rated speed rpm	:		100
rack travel mm	:		17.20
Tolerance mm	:	+-	0.20
Del. quantity			
cm3/1000 strokes	:		83.0
Tolerance			
cm3/1000 strokes	:	+-	7.5
Check tolerance			
cm3/1000s.	:	+-	10.0

LOW IDLE

Rated speed rpm : 300

Rack travel in mm : 8.80
Tolerance mm : +- 0.10
Del. quartity
cm3/1000 strokes : 12.0
Tolerance
cm3/1000 strokes : +- 2.0
Check tolerance
cm3/1000s. : +- 4.0
Spreed
Tolerance
cm3/1000 strokes : 4.5
Check tolerance
cm3/1000 strokes : 7.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 02.09.97 Edition : ISO 4113 Test oil

Combination No. : 0 400 876 188

Injection pump

Pump designation : PES6A80D410RS2085X

EP type number : 0 410 886 045

Governor

Governer design. : RSV350...1400A2C1052

: 1.

Governer no. : 0 420 232 406

Cust. part No. :

Customer-spec. information Customer : MB-NFZ : 0M352 Motor : 80.9 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 1.2

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 har Tolerance bar : ← 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x length mm : 600

x inside diameter : 2.0

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.20 Tolerance mm : +- 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 : -300 : +- 0.50 Phasing

Tolerance

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 9.05 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 52.5

Tolerance

cm3/1000 strokes : +- 0.5

Check tolerance

cm3/1000s. : +- 2.0

Spreed

F03

Tolerance	1	
cm3/1000 strokes	: 2.5	2017201 - 5172
Check tolerance		CONTROL LEVER
cm3/1000s.	: 4.0	control lever
	+	position degree : 112.0
	İ	tolerance degree : +- 4.0
Rated speed rpm	: 350	RATED SPEED
Del. quantity	11.0	mode through the control of the cont
cm3/1000 strokes Tolerance	: 11.0	rack travel mm : 0.85 Tolerance mm : +- 0.55
cm3/1000 strokes	: - 1.0	Rated speed rpm : 1680
Check tolerance cm3/1000s.	: + 2.5	modulational man (190
Spreed	: + 2.3	rack travel mm : 4.00 Rated speed rpm : 1530
Tolerance	1	Tolerance 1/min : +- 15
cm3/1000 strokes	: 2.0	
Check tolerance cm3/1000s.	: 3.5	
GIIO7 10003.	. 3.,	
(p) appropriate an	+	LOW IDLE
(B) SETTING OF IN. WITH GOVERNOR	JECTION PUMP	Satting point w/out bumpon enring
MITTH GOVERNOR	Ţ	Setting point w/out bumper spring
	+	Rated speed rpm : 350
CUIDE OF FELL DOCT	T701	rack travel mm : 6.70
GUIDE SLEEVE POSI	1 100	Tolerance mm : +- 0.10
	Ţ	Rated speed rpm : 100
control lever	_	
position degree Rated speed rpm		CRT mm min. : > 19.00
wared speed (bill	. 555	Testing:
Rack travel in mm		
Tolerance mm	: + 0.20	rack travel mm : 2.00
governor spring	Ī	Rated speed rpm : 530 Tolerance 1/min : +- 30
pre-tension	1	
click setting x	: 5.30	TOROUT CONTROL
		TORQUE CONTROL Rated speed rpm : 1400
FULL LOAD DELIVER	Y AT FULL LOAD STOP	rack travel mm : 9.05
	+	Tolerance mm : +- 0.05
Rated speed rpm	: 1400	Poted speed non . 500
Aneroid pressure hPa	· - I	Rated speed rpm : 500 rack travel mm : 9.95
Del. quantity	Ţ	Tolerance mm : + 0.05
cm3/1000 strokes	: 52.5	
Tolerance	: +- 0.5	Rated speed rpm : 850 rack travel mm : 9.60
cm3/1000 strokes Check tolerance	: +- 0.5	Tolerance mm : 9.00
cm3/1000s.	: +- 2.0	
Spreed	+	Rated speed rpm : 950
Tolerance cm3/1000 strokes	: 2.5	rack travel mm : 9.25 Tolerance mm : +- 0.15
Check tolerance		rocerance with U.19
cm3/1000s.	: 4.0	
	†	
	+	

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure		
hPa	:	-
Rated speed rpm	:	500
Del. quantity		
cm3/1000 strokes	:	48.0
Tolerance		
cm3/1000 strokes	:	← 1.0
Check tolerance		

cm3/1000s. : +- 3.0

Aneroid pressure
hPa : Rated speed rpm : 850
Del. quantity
cm3/1000 strokes : 50.0
Tolerance
cm3/1000 strokes : +- 1.5
Check tolerance
cm3/1000s. : +- 3.5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 14.40
Tolerance mm : + 0.20
Del quantity
cm3/1000 strokes : 83.0
Tolerance
cm3/1000 strokes : + 5.0
Check tolerance
cm3/1000s. : + 8.0

LOW IDLE

Rated speed rpm	:		350
Del. quantity cm3/1000 strokes	:		11.0
Tolerance cm3/1000 strokes	:	+-	1.0
Check tolerance cm3/1000s.	:	+-	2.5
Spreed Tolerance			
cm3/1000 strokes	:		2.0
Check tolerance cm3/1000S.	:		3.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 02.09.97 : ISO 4113 Test oil

Combination No. : 0 400 876 331

Injection pump

Pump designation : PES6A9OD410RS2710 EP type number : 0 410 896 082

Governor

Governer design. : RSV350...1400A0C2006

: -2L

Governer no. : 0 420 232 453

Cust. part No. :

Customer-spec. information Customer : MB-NFZ : OM 366 Motor Power KW : 100.0

TEST BENCH REQUIREMENTS

Inlet line : 2.3

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 000

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

bar 173.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

: 2.30 Prestroke mm : +- 0.05 Tolerance mm Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1380

Rack travel in mm : 10.75 : **←** 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 65.5

Tolerance

cm3/1000 strokes : +- 0.5

Check tolerance

cm3/1000s. : **←** 2.5

Spreed

Tolerance cm3/1000 strokes : 3.0 Check tolerance	Check tolerance cm3/1000s. : 7.0
cm3/1000s. : 7.0	CONTROL LEVER
Rated speed rpm : 350	<pre>control lever position degree : 111.0 tolerance degree : +- 4.0</pre>
Rack travel in mm: 8.10 Tolerance mm: + 0.10 Del. quantity	RATED SPEED rack travel wm : 9.70
cm3/1000 strokes : 8.0 Tolerance	Rated speed rpm : 1435 Tolerance 1/min : +- 5
cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : - 4.0 Spreed	rack travel mm : 4.00 Rated speed rpm : 1505 Tolerance 1/min : +- 15
Tolerance cm3/1000 strokes : 2.5 Check tolerance	rack travel mm : 1.00 Tolerance mm : +- 0.70
cm3/1000s. : 7.0	Rated speed rpm : 1650
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	<pre>control lever position degree : 78.0 tolerance degree : +- 4.0</pre>
control lever position degree : - 3 Rated speed rpm : 800	Setting point w/out bumper spring
Rack travel in mm : 0.50 Tolerance mm : +- 0.20	Rated speed rpm : 100 CRT mm min. : > 19.50
governor spring pre-tension	Testing:
click setting x : 4.50	Rated speed rpm : 350 rack travel mm : 8.10 Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 2.00
Rated speed rpm : 1380 Aneroid pressure hPa : - Del. quantity	Rated speed rpm : 510 Tolerance 1/min : +- 30
cm3/1000 strokes : 65.5 Tolerance cm3/1000 strokes : +- 0.5	TORQUE CONTROL Rated speed rpm : 1380 rack travel mm : 10.75
Check tolerance cm3/1000s. : + 2.5	rack travel mm : 10.75 Tolerance mm : + 0.05
Spreed Tolerance cm3/1000 strokes : 3.0	Rated speed rpm : 500 rack travel mm : 11.85 Tolerance mm : +- 0.05

Rated speed rpm : 900 rack travel mm : 11.40 Tolerance mm : +- 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 54.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s. : \leftarrow 3.5

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 83.0

Tolerance

cm3/1000 strokes : \leftarrow 7.5

Check tolerance

cm3/1000s. : +- 10.0

LOW IDLE

Rated speed rpm : 350

Rack travel in mm : 8.10Tolerance mm : $\leftarrow 0.10$

Del. quantity

cm3/1000 strokes : 8.0

Tolerance

cm3/1000 strokes : \leftarrow 2.0

Check tolerance

cm3/1000S. : +- 4.0

Spreed

Tolerance

cm3/1000 strokes : 2.5

Check tolerance

cm3/1000S. : 7.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 03.09.97 : ISO 4113

Combination No. : 0 400 866 189

Injection pump

Pump designation : PES6A100D320/3RS2691

EP type number : 9 410 230 025

Governor

Governer design. : RSV400...1100A0C2190

: -65R

Governer no. : 0 420 233 304

Cust. part No. : 3921145

Customer-spec. information

Customer : CDC

: 6 CTA 8.3ltr Motor

Power KW

174.5

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5
Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

: 208.5

Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Ourside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0

Tolerance bar : +- 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

10.50 Rack travel in mm :

Tolerance mm : +- 1.50

Firing order : 1-5- 3- 6- 2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 11.00

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1103

Rack travel in mm: 12.75 Tolerance mm: + 0.05 Del. quantity cm3/1000 strokes: 129.0 Tolerance cm3/1000 strokes: + 1.0 Check tolerance cm3/1000s: + 3.0 Spreed	Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 129.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000 strokes : 6.5
Tolerance cm3/1000 strokes : 4.0	CONTROL LEVER
Check tolerance cm3/1000s. : 6.5	<pre>control lever position degree : 95.0 tolerance degree : + 4.0</pre>
Rated speed rpm : 400	RATED SPEED rack travel mm : 11.70 Rated speed rpm : 1145 Tolerance 1/min : +- 5
Tolerance mm : + 0.10 Del. quantity	rack travel mm : 4.00
cm3/1600 strokes : 15.5 + Tolerance +	Rated speed rpm : 1215 Tolerance 1/min : + 5
cm3/1000 strokes : +- 2.0 +- Check tolerance cm3/1000s. : +- 4.5	rack travel mm : 0.85 Tolerance mm : +- 0.55
Spreed Tolerance	Rated speed rpm : 1300
cm3/1000 strokes : 6.0 + Check tolerance	rack travel mm : 4.00 Rated speed rpm : 1220
cm3/1000s. : 8.0	Tolerance 1/min : +- 15
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	<pre>control lever position degree : 74.0 tolerance degree : +- 4.0</pre>
control lever position degree : - 3 Rated speed rpm : 800	Control lever difference Grad : 21.0 tolerance degree : +- 4.0
Rack travel in mm: 0.50 Tolerance mm: +- 0.20	Setting point w/out bumper spring
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 400 rack travel mm : 4.90 Tolerance mm : +- 0.10
Rated speed rpm : 1100	Rated speed rpm : 100

CRT mm min. : > 19.00
Testing:
Rated speed rpm : 400

rack travel mm : 5.40
Tolerance mm : + 0.10

TORQUE CONTROL

Rated speed rpm : 1100 rack travel mm : 12.75 Tolerance mm : +- 0.05

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 Del. quantity

cm3/1000 strokes : 147.0

Tolerance

cm3/1000 strokes : -- 10.0

Check tolerance

cm3/1000S. : +- 15.0

LOW IDLE

Rated speed rpm : 400

Rack travel in mm : 5.40 Tolerance mm : +- 0.10

Del. quantity

cm3/1000 strokes : 16.5

Tolerance

cm3/1000 strokes : \leftarrow 2.0

Check tolerance

cm3/1000s. : +- 4.5

Spreed

Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 03.09.97 Test oil : ISO 4113

Combination No. : 0 402 744 806

Injection pump

Pump designation : PES4P120A320RS7431

EP type number : 0 412 724 805

Governor

Governer design. : RQV325...1500PA1333

: -1K

Governer no. : 0 421 815 555

Cust. part No. : 3393633

Customer-spec. information Customer : CDC : 4BTA-A Motor : 179.0 Power KW

TEST BENCH REQUIREMENTS Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0
Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.90 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1- 3- 4- 2

Phasing : 0-90-180-270

Start of delivery blocking

*NW after s.o.d. : 11.00 Tolerance : + 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1500

Rack travel in mm : 15.25 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 206.0

Tolerance cm3/1000 strokes : +- 1.0	travel mm : 13.50 Tolerance mm : +- 0.50
Check tolerance cm3/1000s. : +- 4.0	
Spreed	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance cm3/1000 strokes : 8.0	Rated speed rpm : 1500 Aneroid pressure hPa : 1000 Del. quantity
Check tolerance cm3/1600s. : 12.0	cm3/1000 strokes : 206.0 + Tolerance + cm3/1000 strokes : +- 1.0
Rated speed rpm : 325	check tolerance cm3/1000s. : +- 4.0 Spreed
Rack travel in mm: 7.80 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 20.0	Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
Tolerance cm3/1000 strokes : +- 3.0 Check tolerance	CONTROL LEVER
cm3/1000s. ; + 5.0 Spreed Tolerance cm3/1000 strokes ; 4.0	control lever position degree : 116.5 tolerance degree : +- 4.0
Check tolerance cm3/1000s. : 8.0	tolerance degree : +- 4.0 RATED SPEED
(E) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 14.25 Rated speed rpm : 1565 Tolerance 1/min : +- 5 rack travel mm : 5.50
GUIDE SLEEVE TRAVEL	+ Rated speed rpm : 1720 + Tolerance 1/min : + 15
Rated speed rpm : 1555 guide sleeve travel mm : 9.02 Tolerance mm : + 0.15 Rated speed rpm : 325	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1800
guide sleeve travel mm : 1.21 Tolerance mm : +- 0.20	LOW IDLE
Rated speed rpm : 1007 guide sleeve travel mm : 5.41 Tolerance mm : +- 0.25	control lever position degree : 75.0 tolerance degree : + 4.0
Rated speed rpm : 560 guide sleeve travel mm : 3.15	Control lever difference Grad: 41.5 tolerance degree: +- 6.0
Tolerance mm : +- 0.25 Rated speed rpm : 1970	Setting point w/out bumper spring Rated speed rpm : 275

		+ Del. quantity	
CRT mm min.	: > 8.10	cm3/1000 strokes	: 192.5
Testing:		+ cm3/1000 strokes	: +- 3.0
Rated speed rpm rack travel mm	: 7.80	- Check tolerance - cm3/1000s. - Spreed	: +- 6.0
Tolerance mm	: +- 0.10	+ Tolerance + cm3/1000 strokes	: 8.0
Rated speed rpm	: 400	Check tolerance cm3/1000s.	: 12.0
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1500 : 15.25 : ← 0.05	Aneroid pressure hPa Rated speed rpm	: - : 750
Rated speed rpm	: 1100 : 14.80	to Del. quantity cm3/1000 strokes Tolerance	: 126.0
rack travel mm Tolerance mm	: + 0.20	cm3/1000 strokes Check tolerance	
Rated speed rpm rack travel mm Tolerance mm	: 750 : 13.90 : +- 0.20	cm3/1000s.	
		STARTING FUEL DEL	IVERY
ANEROID/ALTITUDE COMPENSATOR TEST		Rated speed rpm rack travel man	: 11.60
SETTING		Tolerance mm Del. quantity	
Rated speed rpm Pressure hPa	: 1500 : -	cm3/1000 strokes Tolerance cm3/1900 strokes	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 12.00	Check tolerance cm3/1000s.	: +- 25.0
MEASUREMENT		LOW IDLE	
Rated speed rpm	: 1500	Rated speed rpm	: 325
Pressure hPa rack travel mm Tolerance mm	: 13.10	Rack travel in mm Tolerance mm Del. quantity	
Pressure hPa	: 500	+ cm3/1000 strokes Tolerance	: 20.0
rack travel mm Tolerance mm	: 12.70	cm3/1000 strokes Check tolerance	: + 3.0
		cm3/1000s. + Spreed	: +~ 5.0
FUEL DELIVERY CHA	RACTERISTICS	Tolerance cm3/1000 strokes Check tolerance	: 4.0
Aneroid pressure hPa Rated speed rpm	: 1000 : 1100	theck tolerance cm3/1000s.	: 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 03.09.97 Test oil : ISO 4113

Combination No. : 9 400 030 721

Injection pump

Pump designation : PES6A95D320/3RS2895

EP type number : 9 410 037 238

Governor

Governer design. : RSV475...1250A0C839R

Governer no. :

Cust. part No. : 3929601

Customer-spec. information Customer : CDC : 6BTA Motor Power KW : 130.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

40 temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.70 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + - 0.50

Check

tolerance *NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 9.00

Tolerance : +- 0.50

Check

tolerance "NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 12.70

Tolerance mm	: +- 0.05	+ Rated
Del. quantity		+ Anero + hPa
cm3/1000 strokes	: 108.0	Del.
		+ cm3/1
Tolerance		Toler
cm3/1000 strokes	: ← 1.0	+ cm3/1
		+ Check
Check tolerance		+ cm3/10
cm3/1000s.	: ← 3.0	+ Spree
Samond		+ Toler
Spreed		+ cm3/10
Tolerance		T cm3/1
cm3/1000 strokes	: 3.5	1
		1
Check tolerance		ļ —
cm3/1000s.	: 6.0	+ CONTR
		+
		+ contr
~	550	+ posit
Rated speed rpm	: 550	+ toler
Name and the same	: 5.50	T DATES
Rack travel in mm	: +- 0.10	RATED
Tolerance mm Del. quantity	: 0.10	+ rack Rated
cm3/1000 strokes	: 17.5	+ Toler
Tolerance	. 11.5	I
cin3/1000 strokes	: 2.0	+ rack
Check tolerance	. 2.0	Rated
cm3/1000s.	: +- 4.5	Toler
Spreed		+
Tolerance		rack
cm3/1000 strukes	: 3.5	+ Toler
Check tolerance		+ Rated
cm3/1000s.	: 5.5	+
		+ rack
(5) 0555110 05 111	LEGITAL CUMP	+ Rated
(B) SETTING OF IN	JECITON BOWD	† Toler
WITH GOVERNOR		†
		Ī
		I
GUIDE SLEEVE POSI	TION	+ LOW I
		+
		+
		+ contr
control lever		
control lever position degree	: FREE	+ posit
position degree	: FREE : 800	
position degree Rated speed rpm	: 800	+ posit + toler
position degree Rated speed rpm Rack travel in mm	: 800	posit toler Contr
position degree Rated speed rpm Rack travel in mm	: 800	posit toler Contr
position degree Rated speed rpm Rack travel in mm Tolerance mm	: 800	posit toler Contr
position degree Rated speed rpm Rack travel in mm Tolerance mm	: 800	posit toler Contr Grad toler
position degree Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension	: 0.50 : \(\dots \) 0.20	posit toler Contr
control lever position degree Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x	: 0.50 : \(\dots \) 0.20	posit toler Control Grad toler Setti
position degree Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension	: 0.50 : \(\dots \) 0.20	posit toler Contr Grad toler

Rated speed rpm Aneroid pressure hPa Del. quantity	: 1250
	: 900
cm3/1000 strokes Tolerance	: 108.0
cm3/1000 strokes Check tolerance	: + 1.0
cm3/1000s.	: +- 3.0
Tolerance cm3/1000 strokes	: 3.5
Check tolerance cm3/1000s.	: 6.0
CONTROL LEVER	
control lever position degree tolerance degree	: 108.0 : +- 4.0
RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min	: 11.80 : 1350 : +- 5
rack travel :nm Rated speed rpm Tolerance 1/min	: 5.80 : 1395 : +- 5
rack travel mm Tolerance mm Rated speed rpm	: 0.85 : +- 0.55 : 1460
rack travel mm Rated speed rpm Tolerance 1/min	: 5.80 : 1395 : +- 15

DLE

ol lever ion degree : 78.0 ance degree : + 4.0 ol lever difference : 30.0 ance degree : +- 4.0

ng point w/out bumper spring

speed rpm : 550 travel mm : 5.0 : 5.00 : + 0.10 Tolerance mm

Rated speed rpm	: 100
CRT mm min.	: > 19.00
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 550 : 5.50 : +- 0.10
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1250 : 12.70 : +- 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 500 : 900
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 10.70 : + 0.10
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 480 : 12.20 : +- 0.20
Pressure hPa rack travel mm Tolerance mm	: 350 : 11.40 : + 0.20
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	
hPa Rated speed rpm	: - : 500
Del. quantity cm3/1000 strokes	: 72.5
Tolerance	: +- 1.0
cm3/1000 strokes Check tolerance cm3/1000s.	: +- 3.0
CIIID/TQUUS.	· ** J.U

STARTING FUEL DELI	IVERY
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 100 : 20.50 : +- 0.50
	: 121.5
	: +- 10.0
	: +- 15.0
LOW IDLE	
Rated speed rpm	: 550
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 5.50 : +- 0.10
	: 17.5
	: +- 2.0
	: +- 4.5
	: 3.5
	: 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 03.09.97 Edition : ISO 4113 Test oil

Combination No. : 9 400 030 723

Injection pump

Pump designation : PES6A95D320/3RS2881

EP type number : 9 410 037 215

Governor

Governer design. : RSV475...1100A0c838R

Governer no. : 9 420 034 708

Cust. part No. : 3929404

Customer-spec. information Customer : CDC Motor : 681 Power KW : 110.3

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.85 Tolerance mm : + 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5- 3- 6- 2-

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 7.00 Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 12.75

Tolerance mm	: ← 0.05
Del. quantity cm3/1000 strokes	: 105.0
Tolerance cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: + 3.0
Spreed	
Tolerance cm3/1000 strokes	: 3.5
Check tolerance cm3/1000s.	: 6.0
Rated speed rpm	: 475
Rack travel in mm Tolerance mm	: 5.90 : + 0.10
Del. quantity cm3/1000 strokes	: 22.0
Tolerance cm3/1000 strokes	: +- 2.0
Check tolerance cm3/1000s. Spreed	: 4.5
Tolerance cm3/1000 strokes	: 3.5
Check tolerance cm3/1000s.	: 5.5
(B) SETTING OF IN. WITH GOVERNOR	JECTION PUMP
GUIDE SLEEVE POSI	TION
control lever position degree Rated speed rpm	: - 3 : 800
Rack travel in mm Tolerance mm	: 0.50 : ← 0.20
governor spring pre-tension click setting x	: 4.00

Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1100 : 1000 : 105.0 : +- 1.0 : +- 3.0 : 3.5 : 6.0
CONTROL LEVER	
control lever position degree tolerance degree	: 110.0 : +- 4.0
RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min	: 11.70 : 1160 : +- 5
rack travel mm Rated speed rpm Tolerance 1/min	: 6.50 : 1230 : + 5
rack travel mm Tolerance nm Rated speed rpm	: 0.85 : +- 0.55 : 1400
rack travel mm Rated speed rpm Tolerance 1/min	: 6.50 : 1230 : +- 15
LOW IDLE	

control lever
position degree : 88.0
tolerance degree : +- 4.0

Control lever difference
Grad : 22.0
tolerance degree : +- 6.0

Setting point w/out bumper spring

Rated speed rpm : 475 rack travel mm : 5.40 Tolerance mm : +- 0.10

Rated speed rpm	: 100
CRT mm min.	: > 19.00
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 475 : 5.90 : +- 0.10
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1100 : 12.75 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 800 : 33.65 : + 0.20
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 500 : 1000
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 12.15 : +- 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 700 : 13.10 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 560 : 12.65 : +- 0.20
	RACTERISTICS
FUEL DELIVERY CHAP	
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1000 : 800 : 119.0

Check tolerance cm3/1000s.	: +- 4.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
LOW IDLE	
Rated speed rpm	: 475
Rack travel in mm Tolerance mm Del. quantity	: 5.90 : +- 0.10
cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 22.0
	: + 2.0
	: +- 4.5
	: 3.5
Check tolerance cm3/1000s.	: 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 26,08.97 Edition : ISO 4113 Test oil

Combination No. : 0 400 074 778

Injection pump

Pump designation : PES4M60C320RS185 EP type number : 0 410 064 006

Governor

Governer design. : RSF360/1900M79 Governer no. : 0 420 021 280

Cust. part No. :

Customer-spec. information Customer : MB-PKW : 0M601 D23 LA : 72.0 Motor

Power KW

TEST BENCH REQUIREMENTS

Test oil inlet

temp. $^{\circ}$ C : 40 Tolerance $^{\circ}$ C : \leftarrow 2.0

Overflow valve : 1 469 990 351

Inlet press. bar : 1.0

Test nozzle holde

: 1 688 901 111 assembly

Opening pressure

bar : 148.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 \times length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values ____

BEGINNING OF DELIVERY

Test pressure bar : 25.0 Tolerance bar : + 1.0

Prestroke mm : 2.05Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 21.00 Tolerance mm : \leftarrow 1.00

Firing order : 1-3-4-2

: 0-90-180-270 Phasing

Start of delivery blocking

°NW after s.o.d. : 17.00 Tolerance : +- 0.20 Check

tolerance $^{\circ}NW$: +- 0.30

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 13.80

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 59.5

Tolerance

cm3/1000 strokes : + 0.7

Check tolerance : + 1.7 cm3/1000s.

Spreed

Tolerance

cm3/1000 strokes : 3.0

Check tolerance +	
cm3/1000s. : 3.5	
+	SET IDLE CONTROL LEVER POSITION
Rated speed rpm : 360	Datad aread area
Rack travel in mm: 5.90	Rated speed rpm : 900
Tolerance mm : + 0.10	CRT mm max. : 1.95
Del. quantity	
cm3/1000 strokes : 6.5	LOUIZA
Tolerance + 0.5	LOW IDLE
Spreed	
Tolerance	control lever
cm3/1000 strokes : 1.0	position degree : 12.0
İ	tolerance degree : +- 2.0
(B) SETTING OF INJECTION PUMP	Setting point w/out bumper spring
WITH GOVERNOR	Rared speed rpm : 360
†	rack travel mm : 5.90
IDLE STAGE	SET IDLE AUXILIARY SPRING
+	TEL TOTAL MONTETAINT OF WIND
+	Rated speed rpm : 500
Rack travel in mm: 6.00	rack travel mm : 4.00
Tolerance mm : +- 0.10	Tolerance mm : +- 0.10
	Load pick-up
FULL LOAD DELIVERY AT FULL LOAD STOP	
Rated speed rpm : 900	Rated speed rpm : 200 rack travel mm : 12.20
Rated speed rpm : 900 + Ref. pressure +	rack travet mm : 12.20
ALDA / ADA hPa : 1850	Rated speed rpm : 900
Del. quantity +	
cm3/1000 strokes : 59.5	CRT rnm max. : 1.95
cm3/1000 strokes : +- 0.7	rack travel mm : 5.90
Check tolerance	Rated speed rpm : 360
cm3/1000s. : +- 1.7 +	
Spreed +	
cm3/1000 strokes : 3.0	TORQUE CONTROL
Check tolerance +	
cm3/1000s. : 3.5	Rated speed rpm : 900
	rack travel mm : 13.80 Tolerance mm : + 0.05
RATED SPEED	Totera: ite min . +- 0.05
+	Rated speed rpm : 1500
+	rack travel mm : 12.90
control lever	Tolerance mm : +- 0.10
position degree : 50.0	Rated speed rpm : 1900
Rated speed rpm : 2200	rack travel mm : 12.15
rack travel mm : 8.30	Tolerance mm : +- 0.15
Tolerance mm : \leftarrow 0.20 $+$	Detect encod and a COO
Rated speed rpm : 2600	Rated speed rpm : 900 rack travel mm : 11.15
rack travel mm : 0.50	Tolerance mm : +- 0.10
Tolerance mm : +- 0.50	
+	AD HIGHERT TEST AND AND A
+	ADJUSTMENT TEST ADA/ALDA

		+ Del. quantity
SETTING		- cm3/1000 strokes : 43.0
		+ Tolerance
Rated speed rpm	: 900	+ cm3/1000 strokes : + 0.7
Ref. pressure	, , , , ,	+ Check tolerance
Ref. pressure ALDA / ADA hPa rack travel mm Tolerance mm	: 1600	+ cm3/1000s. : +- 1.7
rack travel mm	0.25	Spreed
Tolerance mm	· + 0.20	Tolerance
roceratice likil	0.20	- cm3/1000 strokes : 3.0
MEASUREMENT		Check tolerance
MEASUREMENT		cm3/1000s. : 3.5
Batad anada ana	: 900	† (m5/10005. : 5.)
Rated speed rpm	. 900	T Def management
Ref. pressure	. 4400	Ref. pressure
ALDA / ADA hPa	: 1100	+ ALDA / ADA hPa : 1100
rack travel mm		Rated speed rpm : 900
Tolerance mm	: +- 0.10	+ Del. quantity
5.6		- cm3/1000 strokes : 43.0
Ref. pressure	750	+ Tolerance
ALDA / ADA hPa	: 750	+ cm3/1000 strokes : +- 0.7
rack travel mm	: -4.30	+ Check tolerance
Tolerance mm	: +- 0.20	+ cm3/1000s. : +- 1.7
		+ Spreed
		† Tolerance
		- + cm3/1000 strokes : 3.0
FUEL DELIVERY CHA	ARACTERISTICS	† Check tolerance
		+ cm3/1000s. : 3.5
Ref. pressure		+
ALDA / ADA hPa	: 1850	+
Rated speed rpm	: 1500	
Del. quantity		HIGH IDLE
cm3/1000 strokes	: 56.4	
Tolerance		Ref. pressure
cm3/1000 strokes	: +- 1.0	+ ALDA / ADA hPa : 1850
Check tolerance		+ Rated speed rpm : 2200
cm3/1000s.	· +- 2.0	+ rack travel mm : 8.30
Spreed	2.3	+ Tolerance mm : +- 0.20
Tolerance		+ Del. quantity
cm3/1000 strokes	: 3.0	cm3/1000 strokes : 31.0
Check tolerance	. 5.0	Tolerance
cm3/1000s.	: 3.5	cm3/1000 strokes : +- 2.2
Ciii37 10003.	. 3.7	+ Check tolerance
Pof procure		+ cm3/1000s. : + 3.2
Ref. pressure ALDA / ADA hPa	. 1950	+ Spreed
Rated speed rpm	: 1900	+ Tolerance + cm3/1000 strokes : 3.0
Spreed		
Del. quantity	. 5/ 0	+ Check tolerance
cm3/1000 strokes	: 54.0	+ cm3/1000s. : 3.5
Tolerance		†
cm3/1000 strokes	: ← 1.2	OTADTING SUEL OF TUE
Check tolerance	3.3	+ STARTING FUEL DELIVERY
cm3/1000s.	: + 2.2	†
Spreed		+ Rated speed rpm : 100
Tolerance	7.6	rack travel mm : > 20.10
cm3/1000 strokes	: 3.0	Del. quantity
Check tolerance		+ cm3/1000 strokes : 52.8
cm3/1000s.	: 3.5	+ Tolerance
		+ cm3/1000 strokes : +- 4.0
Ref. pressure		+ Check tolerance
ALDA / ADA hPa		+ cm3/1000s. : +- 5.0
Rated speed rpm	: 900	+ Spreed
•		

Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 8.5

LOW IDLE

Rated speed rpm : 360
rack travel mm : 5.90
Tolerance mm : + 0.10
Del. quantity
cm3/1000 strokes : 7.8
Check tolerance
cm3/1000s. : + 2.3
Spreed
Check tolerance

cm3/1000s.

: 1.5

control lever
position degree : > 42.00

control lever position degree : < 39.50

SETTING PNEUMATIC FAST IDLE (PLA) (PLA) POSITION

control lever
position degree : 12.0
tolerance degree : +- 2.0

SETTING/TESTING ELECTRONIC IDLE REGULATION (ELR)

Rated speed rpm : 360

Rack travel in mm: 13.80 Tolerance mm: + 0.70 Del. quantity

cm3/1000 strokes : 54.5

Tolerance

cm3/1000 strokes : +- 3.5

Current A : 1.80

Rated speed rpm : 2600

Rack travel in mm : 0.50

Tolerance mm : +- 0.50

Current short-

duration A : 3.00

Starting test

Rated speed rpm : 100

Current A : 1.80

TESTING PNEUMATIC SHUTOFF DEVICE

Rated speed rpm : 360 Vacuum hPa : -450.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 26.08.97 : ISO 4113 Test oil

Combination No. : 0 400 974 876

Injection pump

Pump designation : PES4M60C320RS185 EP type number : 0 410 064 006

Governor

Governer design. : RSF360/1900M84 Governer no. : 0 420 021 287

Cust. part No. :

Customer-spec. information Customer : MB-PKH

Motor : **OM6O1** D23 LA

Power KW : 72.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 1 469 990 351

Inlet press. bar : 1.0

Test nozzle holde

: 1 688 901 111 assembly

Opening pressure

: 148.5 bar Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

: 2.05 : +- 0.05 Prestroke mm Tolerance mm Check

tolerance mm : +- 0.10

Rack travel in mm : 21.00 Tolerance mm : +- 1.00

Firing order : 1- 3- 4- 2

Phasing : 0-90-180-270

Start of delivery blocking

*NW after s.o.d. : 17.00 : +- 0.20 Tolerance Check

tolerance 'NW : + 0.30

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 13.80 Tolerance mm : +-0.05

Del. quantity

cm3/1000 strokes : 59.5

Tolerance

cm3/1000 strokes : \leftarrow 0.7

Check tolerance

: +- 1.7 cm3/1000s.

Spreed

Tolerance +	Tolerance mm : ÷- 0.50
cm3/1000 strokes : 3.0	
Check tolerance	SET IDLE CONTROL LEVER POSITION
cm3/1000s. : 3.5	000
7/0	Rated speed rpm : 900
Rated speed rpm : 360	4.05
†	CRT mm max. : 1.95
Rack travel in mm: 5.90	
Tolerance mm : + 0.10	
Del. quantity	LOW IDLE
cm3/1000 strokes : 6.5	
Tolerance	
cm3/1000 strokes : + 0.5	control lever
Spreed +	position degree : 12.0
Tolerance +	tolerance degree : +- 2.0
cm3/1000 strokes : 1.0 +	
†	Setting point w/out bumper spring
(D) SETTING OF THUESTION SUMP	Rated speed rpm : 360
(B) SETTING OF INJECTION PUMP	rack travel mm : 5.90
WITH GOVERNOR +	CET THE AUVILIANY CONTAC
†	SET IDLE AUXILIARY SPRING
IN 5 CTACE	D-4 - 1 1
IDLE STAGE	Rated speed rpm : 500
†	rack travel mm : 4.00
	Tolerance mm : +- 0.10
Rack travel in mm: 6.00	Land at the con-
Tolerance mm : +- 0.10	Load pick-up
	Rated speed rpm : 200
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 200 rack travel mm : 12.20
FOLL LOAD DELIVERY AT FOLL LOAD STOP	rack travet mm . 12.20
Rated speed rpm : 900	Rated speed rpm : 900
Ref. pressure	kated speed ipiii . 900
ALDA / ADA hPa : 1850	CRT mm max. : 1.95
Del. quantity	CKI IIMI MAX 1.75
cm3/1000 strokes : 59.5	rack travel mm : 5.90
Tolerance	Rated speed rpm : 360
cin3/1000 strokes : + 0.7	Nated Speed 1 pill . 300
Check tolerance	
cm3/1000s. : + 1.7	
Spreed	TORQUE CONTROL
•	
lolerance +	1011102
Tolerance + 3.0 +	
cm3/1000 strokes : 3.0	Rated speed rpm : 900
cm3/1000 strokes : 3.0 + Check tolerance +	Rated speed rpm : 900 rack travel mm : 13.80
cm3/1000 strokes : 3.0	Rated speed rpm : 900
cm3/1000 strokes : 3.0 + Check tolerance +	Rated speed rpm : 900 rack travel mm : 13.80 Tolerance mm : +- 0.05
cm3/1000 strokes : 3.0	Rated speed rpm : 900 rack travel mm : 13.80 Tolerance mm : +- 0.05 Rated speed rpm : 1500
cm3/1000 strokes : 3.0 + Check tolerance +	Rated speed rpm : 900 rack travel mm : 13.80 Tolerance mm : +- 0.05 Rated speed rpm : 1500
cm3/1000 strokes : 3.0	Rated speed rpm : 900 rack travel mm : 13.80 Tolerance mm : +- 0.05 Rated speed rpm : 1500 rack travel mm : 12.90
cm3/1000 strokes : 3.0	Rated speed rpm : 900 rack travel mm : 13.80 Tolerance mm : +- 0.05 Rated speed rpm : 1500 rack travel mm : 12.90
cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 3.5 RATED SPEED	Rated speed rpm : 900 rack travel mm : 13.80 Tolerance mm : +- 0.05 Rated speed rpm : 1500 rack travel mm : 12.90 Tolerance mm : +- 0.10
cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 3.5 RATED SPEED control lever position degree : 50.0	Rated speed rpm : 900 rack travel mm : 13.80 Tolerance mm : +- 0.05 Rated speed rpm : 1500 rack travel mm : 12.90 Tolerance mm : +- 0.10 Rated speed rpm : 1900
cm3/1000 strokes : 3.0 Check tolerance cm3/1000S. : 3.5 RATED SPEED control lever	Rated speed rpm : 900 rack travel mm : 13.80 Tolerance mm : +- 0.05 Rated speed rpm : 1500 rack travel mm : 12.90 Tolerance mm : +- 0.10 Rated speed rpm : 1900 rack travel mm : 12.15 Tolerance mm : +- 0.15
cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 3.5 RATED SPEED control lever position degree : 50.0 Rated speed rpm : 2150 rack travel mm : 6.60	Rated speed rpm : 900 rack travel mm : 13.80 Tolerance mm : +- 0.05 Rated speed rpm : 1500 rack travel mm : 12.90 Tolerance mm : +- 0.10 Rated speed rpm : 1900 rack travel mm : 12.15 Tolerance mm : +- 0.15 Rated speed rpm : 500
cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 3.5 RATED SPEED control lever position degree : 50.0 Rated speed rpm : 2150	Rated speed rpm : 900 rack travel mm : 13.80 Tolerance mm : +- 0.05 Rated speed rpm : 1500 rack travel mm : 12.90 Tolerance mm : +- 0.10 Rated speed rpm : 1900 rack travel mm : 12.15 Tolerance mm : +- 0.15 Rated speed rpm : 500 rack travel mm : 500 rack travel mm : 15.30
cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 3.5 RATED SPEED control lever position degree : 50.0 Rated speed rpm : 2150 rack travel mm : 6.60 Tolerance mm : + 0.20	Rated speed rpm : 900 rack travel mm : 13.80 Tolerance mm : +- 0.05 Rated speed rpm : 1500 rack travel mm : 12.90 Tolerance mm : +- 0.10 Rated speed rpm : 1900 rack travel mm : 12.15 Tolerance mm : +- 0.15 Rated speed rpm : 500
cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 3.5 RATED SPEED control lever position degree : 50.0 Rated speed rpm : 2150 rack travel mm : 6.60 Tolerance mm : + 0.20 Rated speed rpm : 2600	Rated speed rpm : 900 rack travel mm : 13.80 Tolerance mm : +- 0.05 Rated speed rpm : 1500 rack travel mm : 12.90 Tolerance mm : +- 0.10 Rated speed rpm : 1900 rack travel mm : 12.15 Tolerance mm : +- 0.15 Rated speed rpm : 500 rack travel mm : 15.30 Tolerance mm : +- 0.30
cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 3.5 RATED SPEED control lever position degree : 50.0 Rated speed rpm : 2150 rack travel mm : 6.60 Tolerance mm : + 0.20	Rated speed rpm : 900 rack travel mm : 13.80 Tolerance mm : +- 0.05 Rated speed rpm : 1500 rack travel mm : 12.90 Tolerance mm : +- 0.10 Rated speed rpm : 1900 rack travel mm : 12.15 Tolerance mm : +- 0.15 Rated speed rpm : 500 rack travel mm : 500 rack travel mm : 15.30

rack travel mm Tolerance mm		‡	Check tolerance cm3/1000s.	: 3.5
ADJUSTMENT TEST A	ADA/ALDA		Ref. pressure ALDA / ADA hPa	: 1100
SETTING	ieri, riceri	+	Rated speed rpm Del. quantity	900
	000	Ŧ	cm3/1000 strokes	: 43.0
Rated speed rpm Ref. pressure		İ	Tolerance cm3/1000 strokes	: ← 0.7
ALDA / ADA hPa rack travet mm		‡	Check tolerance cm3/1000s.	:
Tolerance mm		1	Spreed Tolerance	
MEASUREMENT		1	cm3/1000 strokes Check tolerance	
Rated speed rpm		1	cm3/1000s.	
Ref. pressure ALDA / ADA hPa	• 1100	I	Ref. pressure	
rack travel mm	-2.65	1	ALDA / ADA hPa	1850
Tolerance mm		+	Rated speed rpm Del. quantity	
Ref. pressure		Ţ	cm3/1000 strokes	: 64.3
ALDA / ADA hPa		1	Tolerance	
rack travel mm	: -4.30	+	cm3/1000 strokes	: + 2.0
Tolerance mm	: +- 0.20	+	Check tolerance	
		+	cm3/1000s.	: ← 3.0
		†	Tolerance	. 7.0
FUEL DELIVERY CHA	ADACTEDISTICS		cm3/1000 strokes Check tolerance	
FUEL DELIVERY CHA	RRACIERISIICS	I	cm3/1000s.	
Ref. pressure		1	CIII 57 (COC) 50 .	. 3.3
ALDA / ADA hPa	: 1850	+	Ref. pressure	
Rated speed rpm		+	ALDA / ADA hPa	: 1100
Del. quantity		+	Rated speed rpm	: 900
cm3/1000 strokes	: 56.4	+	Del. quantity	
Tolerance		+	cm3/1000 strokes	: 43.0
cm3/1000 strokes		†	Tolerance	
Check tolerance		†	cm3/1000 strokes	: ← 0.7
cm3/1000s.	: +- 2.0	†	Check tolerance cm3/1000s.	: ← 1.7
Spreed Tolerance		Ī	Spreed	: — 1.7
cm3/1000 strokes	: 3.0	I	Tolerance	
Check tolerance		1	cm3/1000 strokes	: 3.0
cm3/1000s.	: 3.5	1	Check tolerance	
		+	cm3/1000s.	: 3.5
Ref. pressure		+		
ALDA / ADA hPa		†		
Rated speed rpm	: 1900	†	HITCH IN C	
Spreed		1	HIGH IDLE	
Del. quantity cm3/1000 strokes	: 54.0	Ī	Ref. pressure	
Tolerance	. 54.0	I	ALDA / ADA hPa	: 1850
cm3/1000 strokes	: +- 1.2	1	Rated speed rpm	
Check tolerance		+	rack travel mm	: 6.60
cm3/1000s.	: +- 2.2	+	Tolerance mm	: ← 0.20
Spreed		+	Del. quantity	
Tolerance	. 7.0	+	cm3/1000 strokes	: 21.4
cm3/1000 strokes	: 3.0	‡	Tolerance cm3/1000 strokes	: +- 2.2

Check tolerance cm3/1000s.	:	+-	3.2	
Spreed Tolerance				
7 (4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	:		3.0	
Check tolerance	•		2.0	
cm3/1000s.	:		3.5	
STARTING FUEL DEL	IV	ERY		
Rated speed rpm	:		100	
rack travel mm	:	>	20.10	
Del. quantity				
cm3/1000 strokes	:		52.8	
Tolerance			/ 0	
cm3/1000 strokes Check tolerance	•	T-	4.0	
cm3/1000s.		+-	5.0	
Spreed				
Tolerance				
cm3/1000 strokes	:		8.0	
Check tolerance cm3/1000s.			8.5	
LOW IDLE				
Rated speed rpm	:		360	
rack travel mm			5.9C	
Tolerance mm	•	+	0.10	
Del. quantity cm3/1000 strokes	:		7.8	
Check tolerance	•		7.0	
cm3/1000s.	:	+-	2.3	
Spreed				
Check tolerance			4.5	
cm3/1000s.	:		1.5	
SETTING PNEUMATIC	F	AST	IDLE ((PLA)
control lever			40.0	
position degree	•		12.0 2.0	
tolerance degree		-	/ / / /	

Del. quantity
cm3/1000 strokes : 54.5
Tolerance
cm3/1000 strokes : + 3.5

Current A : 1.80

Rated speed rpm : 2600

Rack travel in mm : 0.50
Folerance mm : + 0.50

Current shortduration A : 3.00

Starting test

Rated speed rpm : 100

Current A : 1.80

TESTING PNEUMATIC SHUTOFF DEVICE

Rated speed rpm : 360
Vacuum hPa : -450.0

End of test specification sheet

REGULATION (ELR)

Rated speed rpm : 360

Rack travel in mm : 13.80 Tolerance mm : + 0.70

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 25.08.97

Test oil

: ISO 4113

Combination No. : 0 400 074 883

Injection pump

Pump designation : PE34M60C320RS185

EP type number

: 0 410 064 006

Governor

Governer design. : RSF375/1900M78

Governer no. : 0 420 021 274

Cust. part No. :

Customer-spec. information

Customer : MB-PKW

Motor

: 0M601 D23 LA

Power KW

: 72.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C

40

Tolerance *C

: +- 2.0

Overflow valve

: 1 469 990 351

Inlet press. bar : 1.0

Test nozzle holde

assembly

: 1 688 901 111

Opening pressure

: 148.5

Tolerance bar

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter:

2.0

x length mm : 600

GO2

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm 2.05 : **←** 0.05 Tolerance mm Check

: + 0.10 tolerance mm

Rack travel in mm : 21.00 Tolerance mm : +- 1.00

Firing order : 1- 3- 4- 2

: 0-90-180-270 Phasing

Start of delivery blocking

*NW after s.o.d. : 17.00 : +- 0.20 Tolerance

Check

: +- 0.30 tolerance °NW

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 13.80 Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 59.5

Tolerance

cm3/1000 strokes : \leftarrow 0.7

Check tolerance

: + 1.7 cm3/1000s.

Spreed

Tolerance

cm3/1000 strokes : 3.0

Check tolerance cm3/1000s. : 3.5	†
	SET IDLE CONTROL LEVER POSITION
Rated speed rpm : 375	+ Rated speed rpm : 900
Rack travel in mm : 5.90 Tolerance mm : +- 0.10 Del. quantity	CRT mm max. : 1.95
cm3/1000 strokes : 6.5 Tolerance	LOW IDLE
cm3/1000 strokes : + 0.5 Spreed	1
Tolerance cm3/1000 strokes : 1.0	control lever position degree : 12.0 tolerance degree : + 2.0
(8) SETTING OF INJECTION PUMP WITH GOVERNOR	Setting point w/out bumper spring Rated speed rpm : 375 rack travel mm : 5.90
IDLE STAGE	SET IDLE AUXILIARY SPRING
Rack travel in mm : 6.00 Tolerance mm : + 0.10	Rated speed rpm : 500 rack travel mm : 4.20 Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Load pick-up
	Rated speed rpm : 200 rack travel mm : 13.00
Ref. pressure	+
ALDA / ADA hPa : 1850 Del. quantity	Rated speed rpm : 900
cm3/1000 strokes : 59.5 Tolerance	+ CRT mm max. : 1.95
cm3/1000 strokes : +- 0.7 Check tolerance	rack travel mm : 5.90 Rated speed rpm : 375
cm3/1000s. : + 1.7 Spreed	‡
Tolerance cm3/1000 strokes : 3.0 Check tolerance	TORQUE CONTROL
cm3/1000s. : 3.5	Rated speed rpm : 900 rack travel mm : 13.80 Tolerance mm : + 0.05
RATED SPEED	Pated speed rom : 1500
control lever position degree : 50.0	rack travel mm : 12.90 Tolerance mm : + 0.10
Rated speed rpm : 2200	Rated speed rpm : 1900 rack travel mm : 12.15
rack travel mm : 8.30 Tolerance mm : +- 0.20	+ Tolerance mm : +- 0.10
Rated speed rpm : 2600	Rated speed rpm : 900 rack travel mm : 11.15
rack travel mm : 0.50 Tolerance mm : + 0.50	Tolerance mm : + 0.10
	T

ADJUSTMENT TEST ADA/ALDA

		1 Dal manage
SETTING		+ Del. quantity
SELLTING		- cm3/1000 strokes : 43.0
Datasi amasal uum	. 000	+ Tolerance
Rated speed rpm	; 900	cm3/1000 strokes : +- 0.7
Ref. pressure ALDA / ADA hPa	. 1400	+ Check tolerance
ALUA / AUA NPa	1000	+ cm3/1000s. : +- 1.7
rack travel mm	: -0.25	+ Spreed
Tolerance mm	: +- 0.20	+ Tolerance
***		+ cm3/1000 strokes : 3.0
MEASUREMENT		- Check tolerance
	60-	+ cm3/1000s. : 3.5
Rated speed rpm	: 900	†
Ref. pressure		+ Ref. pressure
ALDA / ADA hPa		+ ALDA / ADA hPa : 1100
rack travel mm		+ Rated speed rpm : 900
Tolerance mm	: +- 0.10	+ Del. quantity
		+ cm3/1000 strokes : 43.0
Ref. pressure		+ Tolerance
ALDA / ADA hPa		+ cm3/1000 strokes : $+$ 0.7
rack travel mm	: -4.30	+ Check tolerance
Tolerance mm	: +- 0.20	+ cm3/1000s. : +- 1.7
		+ Spreed
		+ Tolerance
		+ cm3/1000 strokes : 3.0
FUEL DELIVERY CHA	ARACTERISTICS	+ Check tolerance
		+ cm3/1000s. : 3.5
Ref. pressure		
ALDA / ADA hPa	: 1850	1
Rated speed rpm		
Del. quantity		HIGH IDLE
cm3/1000 strokes	: 56.4	112311 1222
Tolerance	. 55.4	Ref. pressure
cm3/1000 strokes	· +- 1 0	ALDA / ADA hPa : 1850
Check tolerance		Rated speed rpm : 2200
	: +- 2.0	rack travel mm : 8.30
Spreed	2.0	Tolerance mm : +- 0.20
Tolerance		Del. quantity
cm3/1000 strokes		cm3/1000 strokes : 31.0
	• 70	
Check tolerance		† Tolerance
Check tolerance		Tolerance cm3/1000 strokes : +- 2.2
Check tolerance cm3/1000s.		Tolerance cm3/1000 strokes : +- 2.2 Check tolerance
Check tolerance cm3/1000s. Ref. pressure	: 3.5	Tolerance - cm3/1000 strokes : +- 2.2 - Check tolerance - cm3/1000s. : +- 3.2
Check tolerance cm3/1000S. Ref. pressure ALDA / ADA hPa	: 3.5 : 1850	Tolerance cm3/1000 strokes : +- 2.2 Check tolerance cm3/1000s. : +- 3.2 Spreed
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm	: 3.5 : 1850	Tolerance cm3/1000 strokes : +- 2.2 Check tolerance cm3/1000s. : +- 3.2 Spreed Tolerance
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed	: 3.5 : 1850	Tolerance cm3/1000 strokes : +- 2.2 Check tolerance cm3/1000s. : +- 3.2 Spreed Tolerance cm3/1000 strokes : 3.0
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity	: 3.5 : 1850 : 1900	Tolerance cm3/1000 strokes : +- 2.2 Check tolerance cm3/1000s. : +- 3.2 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes	: 3.5 : 1850 : 1900	Tolerance cm3/1000 strokes : +- 2.2 Check tolerance cm3/1000s. : +- 3.2 Spreed Tolerance cm3/1000 strokes : 3.0
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance	: 3.5 : 1850 : 1900 : 54.0	Tolerance cm3/1000 strokes : +- 2.2 Check tolerance cm3/1000s. : +- 3.2 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 3.5 : 1850 : 1900 : 54.0	Tolerance cm3/1000 strokes : +- 2.2 Check tolerance cm3/1000s. : +- 3.2 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 3.5
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 3.5 : 1850 : 1900 : 54.0 : ← 1.2	Tolerance cm3/1000 strokes : +- 2.2 Check tolerance cm3/1000s. : +- 3.2 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 3.5 : 1850 : 1900 : 54.0	Tolerance cm3/1000 strokes : +- 2.2 Check tolerance cm3/1000s. : +- 3.2 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 3.5 STARTING FUEL DELIVERY
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 3.5 : 1850 : 1900 : 54.0 : ← 1.2	Tolerance cm3/1000 strokes : +- 2.2 Check tolerance cm3/1000s. : +- 3.2 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 3.5 STARTING FUEL DELIVERY Rated speed rpm : 100
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: 3.5 : 1850 : 1900 : 54.0 : + 1.2 : + 2.2	Tolerance cm3/1000 strokes: +- 2.2 Check tolerance cm3/1000s. : +- 3.2 Spreed Tolerance cm3/1000 strokes: 3.0 Check tolerance cm3/1000s. : 3.5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm :> 20.10
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000s strokes	: 3.5 : 1850 : 1900 : 54.0 : + 1.2 : + 2.2	Tolerance cm3/1000 strokes : +- 2.2 Check tolerance cm3/1000S. : +- 3.2 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000S. : 3.5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm :> 20.10 Del. quantity
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000s strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance	: 3.5 : 1850 : 1900 : 54.0 : + 1.2 : +- 2.2 : 3.0	Tolerance cm3/1000 strokes: +- 2.2 Check tolerance cm3/1000s. : +- 3.2 Spreed Tolerance cm3/1000 strokes: 3.0 Check tolerance cm3/1000s. : 3.5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm :> 20.10 Del. quantity cm3/1000 strokes: 52.8
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000s strokes	: 3.5 : 1850 : 1900 : 54.0 : + 1.2 : +- 2.2 : 3.0	Tolerance cm3/1000 strokes : +- 2.2 Check tolerance cm3/1000s. : +- 3.2 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 3.5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm :> 20.10 Del. quantity cm3/1000 strokes : 52.8 Tolerance
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000s strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance	: 3.5 : 1850 : 1900 : 54.0 : + 1.2 : +- 2.2 : 3.0	Tolerance cm3/1000 strokes: +- 2.2 Check tolerance cm3/1000s. : +- 3.2 Spreed Tolerance cm3/1000 strokes: 3.0 Check tolerance cm3/1000s. : 3.5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm :> 20.10 Del. quantity cm3/1000 strokes: 52.8
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Ref. pressure	: 3.5 : 1850 : 1900 : 54.0 : + 1.2 : + 2.2 : 3.0 : 3.5	Tolerance cm3/1000 strokes : +- 2.2 Check tolerance cm3/1000s. : +- 3.2 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 3.5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm :> 20.10 Del. quantity cm3/1000 strokes : 52.8 Tolerance
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Ref. pressure	: 3.5 : 1850 : 1900 : 54.0 : + 1.2 : + 2.2 : 3.0 : 3.5	Tolerance cm3/1000 strokes : + 2.2 Check tolerance cm3/1000s. : + 3.2 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 3.5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : > 20.10 Del. quantity cm3/1000 strokes : 52.8 Tolerance cm3/1000 strokes : + 4.0
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 3.5 : 1850 : 1900 : 54.0 : +- 1.2 : +- 2.2 : 3.0 : 3.5 : 1100	Tolerance cm3/1000 strokes : + 2.2 Check tolerance cm3/1000s. : + 3.2 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 3.5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : > 20.10 Del. quantity cm3/1000 strokes : 52.8 Tolerance cm3/1000 strokes : + 4.0 Check tolerance

Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s.: 8.5 LOW IDLE Rated speed rpm : 375 Del. quantity cm3/1000 strokes : 7.8 Check tolerance cm3/1000s.: +- 2.3 Spreed Check tolerance : 1.5 cm3/1000s. control lever position degree : > 42.00 control lever position degree : < 39.50 SETTING PNEUMATIC FAST IDLE (PLA) (PLA) POSITION contro! lever position degree : 12.0 tolerance degree : +- 2.0

Rated speed rpm : 425

Rack travel in mm: 7.65 Tolerance mm : \leftarrow 0.80

Del. quantity

cm3/1000 strokes : 17.3

Tolerance

cm3/1000 strokes : +- 4.5Check tolerance

cm3/1000s. : +- 5.5 : 450.0 Vacuum hPa

TESTING PNEUMATIC SHUTOFF DEVICE

375 Rated speed rpm : Vacuum hPa : -450.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 02.09.97 : ISO 4113 Test oil

Combination No. : 0 400 074 883F3

Injection pump

Pump designation : PES4M600320RS185 EP type number : 0 410 064 006

Governor

Governer design. : RSF375/1900M78 Governer no. : 0 420 021 274

Cust. part No. :

Customer-spec. information Customer : MB-PKW

: 0M601 D23 LA : 72.0 Motor Power KW

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 469 990 351

Inlet press. bar : 1.0

Test nozzle holde

: 1 688 901 111 assembly

Opening pressure

: 148.5 bar Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.05 Tolerance mm : +- 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm : 21.00 Tolerance mm : +- 1.00

Firing order : 1- 3- 4- 2

Phasing : 0-90-180-270

Start of delivery blocking

*NW after s.o.d. : 17.00 Tolerance : +- 0.20

Check

tolerance °NW : +- 0.30

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 13.80

Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 59.5

Tolerance

cm3/1000 strokes : +- 0.7

Check tolerance : +- 1.7 cm3/1000s.

Spreed

Tolerance

cm3/1000 strokes : 3.0

Check tolerance cm3/1000s. : 3.5	İ
	SET IDLE CONTROL LEVER POSITION
Rated speed rpm : 375	Rated speed rpm : 900
Rack travel in mm: 5.90 Tolerance mm: + 0.10	+ CRT mm max. : 1.95
Del. quantity cm3/1000 strokes : 6.5	Ţ
Tolerance cm3/1000 strokes : +- 0.5 Spreed	LOW JDLE
Tolerance cm3/1000 strokes : 1.0	control lever position degree : 12.0 tolerance degree : + 2.0
(2)	+
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Setting point w/out bumper spring Rated speed rpm : 375 rack travel mm : 5.90
IDLE STACE	SET IDLE AUXILIARY SPRING
Rack travel in mm : 6.00 Tolerance mm : +- 0.10	Rated speed rpm : 500 rack travel mm : 4.20 Tolerance mm : +- 0.10
FULL LOAD DELIVEDY AT SUIL LOAD CTOD	Load pick-up
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Rated speed rpm : 200
Rated speed rpm : 900 Ref. pressure	rack travel mm : 13.00
ALDA / ADA hFa : 1850 Del. quantity	Rated speed rpm : 900
cm3/1000 strokes : 59.5 Tolerance	CRT mm max. : 1.95
cm3/1000 strokes : + 0.7 Check tolerance	rack travel mm : 5.90 Rated speed rpm : 375
cm3/1000s. : +- 1.7 Spreed	‡
Tolerance cm3/1000 strokes : 3.0 Check tolerance	TORQUE CONTROL
cm3/1000s. : 3.5	Rated speed rpm : 900 rack travel mm : 13.80 Tolerance mm : +- 0.05
RATED SPEED	Rated speed rpm : 1500
control lever position degree : 50.0	rack travel mm : 12.90 Tolerance mm : +- 0.10
	Rated speed rpm : 1900
Rated speed rpm : 2200 rack travel mm : 8.30 Tolerance mm : +- 0.20	rack travel mm : 12.15 Tolerance mm : + 0.10
Rated speed rpm : 2600 rack travel mm : 0.50 Tolerance mm : +- 0.50	Rated speed rpm : 900 rack travel mm : 11.15 Tolerance mm : + 0.10
	ADJUSTMENT TEST ADA/ALDA

	1	- Del. quantity
SETTING	1	- cm3/1000 strokes : 43.0
	1	- Tolerance
Rated speed rpm	: 900	- cm3/1000 strokes : +- 0.7
Ref. pressure		- Check tolerance
ALDA / ADA hPa	: 1600	$- \text{cm}^3/1000\text{s}. : + 1.7$
rack travel mm	: -0.25	- Spreed
Tolerance mm	,	- Tolerance
roce, drice time	1	- cm3/1000 strokes : 3.0
MEASUREMENT	1	- Check tolerance
TIEMOONE PENT	1	- cm3/1000s. : 3.5
Rated speed rpm	: 900	
Ref. pressure	. , , , ,	- Ref. pressure
ALDA / ADA hPa	: 1100	- ALDA / ADA hPa : 1100
rack travel mm		- Rated speed rpm : 900
Tolerance mm	· · · · · · · · · · · · · · · · · · ·	- Del. quantity
rocer di lee imi		- cm3/1000 strokes : 43.0
Ref. pressure		- Tolerance
ALDA / ADA hPa	: 750	- cm3/1000 strokes : +- 0.7
rack travel mm		- Check tolerance
Tolerance mm	: +- 0.20	- cm3/1000s. : +- 1.7
rocerance man	0.20	- Spreed
]	- Tolerance
		- cm3/1000 strokes : 3.0
FUEL DELIVERY CHA	ADACTEDISTICS	- Check tolerance
POEL DELIVER! CHA	ARMCIERISTICS 7	- cm3/1000s. : 3.5
Dof massums	7	- CM3/10005. : 3.3
Ref. pressure ALDA / ADA hPa	: 1850	•
		-
Rated speed rpm	: 1500	HICH IN F
Del. quantity	. 54.4	- HIGH IDLE
cm3/1000 strokes	: 56.4	- D. F
Tolerance	1	- Ref. pressure
cm3/1000 strokes	; +- 1.0	- ALDA / ADA hPa : 1850
Check tolerance	†	- Rated speed rpm : 2200
	: +	- rack travel mm : 8.30
Spreed	†	- Tolerance mm : + 0.20
Tolerance	7.0	- Del. quantity
cm3/1000 strokes	: 3.0	- cm3/1000 strokes : 31.0
Check tolerance	,	- Tolerance
cm3/1000S.	: 3.5	- cm3/1000 strokes : + 2.2
	1	- Check tolerance
Ref. pressure	1050	- cm3/1000s. : +- 3.2
ALDA / ADA hPa		- Spreed
Rated speed rpm	: 1900	- Tolerance
Spreed	†	- cm3/1000 strokes : 3.0
Del. quantity	5/ 0	- Check tolerance
cm3/1000 strokes	: 54.0	- cm3/1000s. : 3.5
Tolerance		-
cm3/1000 strokes	: +- 1.2	OTADTANG FUEL NELTUEDY
Check tolerance	1	- STARTING FUEL DELIVERY
cm3/1000s.	: +- 2.2	- 400
Spreed	†	- Rated speed rpm : 100
Tolerance	. 70	rack travel mm : > 20.10
cm3/1000 strokes	: 3.0	- Del. quantity
Check tolerance	: 3.5	- cm3/1000 strokes : 52.8
cm3/1000S.	• • • • • • • • • • • • • • • • • • • •	- Tolerance
CIII 57 10005.	. 3.5	
	. 3.3	- cm3/1000 strokes : +- 4.0
Ref. pressure		- cm3/1000 strokes : +- 4.0 - Check tolerance
Ref. pressure ALDA / ADA hPa	: 1100	- cm3/1000 strokes : +- 4.0 - Check tolerance - cm3/1000s. : +- 5.0
Ref. pressure	: 1100	- cm3/1000 strokes : +- 4.0 - Check tolerance

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s.

: 8.5

LOW IDLE

Rated speed rpm : 375

Del. quantity

cm3/1000 strokes : 7.8 Check tolerance

cm3/1000s.

: +~ 2.3

Spreed.

Check tolerance

cm3/1000s. : 1.5

control lever

position degree : > 42.00

control lever

position degree : < 39.50

SETTING PNEUMATIC FAST IDLE (PLA)

(PLA) POSITION

control lever

position degree : 12.0

tolerance degree : + 2.0

Rated speed rpm : 425

Rack travel in mm: 7.65

Tolerance mm : \leftarrow 0.80

Del. quantity cm3/1000 strokes : 17.3

Tolerance

cm3/1000 strokes : +- 4.5

Check tolerance

cm3/1000s.

: +~ 5.5

Vacuum hPa : 450.0

TESTING PNEUMATIC SHUTOFF DEVICE

Rated speed rpm :

375

Vacuum hPa : -450.0

G09

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 02.09.97 Edition : ISO 4113 Test oil

Combination No. : 0 400 074 883Y

Injection pump

Pump designation : PES/M600320RS185 EP type number : 0 410 064 006

Governor

Governer design. : RSF375/1900M78 Governer no. : 0 420 021 274

Cust. part No. :

Customer-spec. information Customer : MB-PKW

Motor : 0M601 D23 LA

: 72.0 Power KW

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 1 469 990 351

Inlet press. bar : 1.0

Test nozzle holde

: 1 688 901 111 assembly

Opening pressure

: 148.5 bar Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.05 Tolerance mm : +- 0.05 tolerance mm : +- 0.10

Rack travel in mm : 21.00 Tolerance mm : + 1.00

Firing order : 1- 3- 4- 2

Phasing : 0-90-180-270

Start of delivery blocking

*NW after s.o.d.: 17.00 : +- 0.20 Tolerance Check

tolerance °NW : +- 0.30

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 13.80 Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 59.5

Tolerance

cm3/1000 strokes : +- 0.7

Check tolerance cm3/1000s. : +- 1.7

Spreed Tolerance

cm3/1000 strokes : 3.0

Check tolerance	+
cm3/1000s. : 3.5	+
	+ SET IDLE CONTROL LEVER POSITION
Rated speed rpm : 375	1
	Rated speed rpm : 900
Rack travel in mm : 5.90	T Mateu Speed Pill . 700
	T 00T 4 05
Tolerance mm : + 0.10	+ CRT mm max. : 1.95
Del. quantity	†
cm3/1000 strokes : 6.5	
Tolerance	+ LON IDIE
$cm3/1000$ strokes : \leftarrow 0.5	1
Spreed	1
Tolerance	control lever
cm3/1000 strokes : 1.0	S .
cms/1000 strokes : 1.0	position degree : 12.0
	tolerance degree : +- 2.0
	+
(B) SETTING OF INJECTION PUMP	+ Setting point w/out bumper spring
WITH GOVERNOR	+ Rated speed rpm · 375
	rack travel mm : 5.90
	1 3010 01 0700 11111
IDLE STAGE	T SET IDLE AUXILIARY SPRING
INCE 2 MAGE	T SET INCE PURILLARY SPRING
	T Dotted and and 1000
	+ Rated speed rpm : 500
Rack travel in mm : 6.00	† rack travel mm : 4.20
Tolerance mm : +- 0.10	+ Tolerance mm : + 0.10
	}
	Load pick-up
FULL LOAD DELIVERY AT FULL LOAD STOP	
TOBE COMP PERFECT AT TOEL COMP OTO	Rated speed rpm : 200
Rated speed rpm : 900	
	rack travel mm : 13.00
Ref. pressure	†
ALDA / ADA hPa : 1850	+ Rated speed rpm : 900
Del. quantity	+
cm3/1000 strokes : 59.5	CRT mm max. : 1.95
Tolerance	
cm3/1000 strokes : + 0.7	rack travel mm : 5.90
Check tolerance	+ Rated speed rpm : 375
cm3/1000s. : + 1.7	†
Spreed	†
Tolerance	
cm3/1000 strokes : 3.0	+ TORQUE CONTROL
Check tolerance	}
cm3/1000s. : 3.5	Rated speed rpm : 900
	rack travel mm : 13.80
	Tolerance mm : + 0.05
DATES CREES	Toterance mm : + 0.05
RATED SPEED	T Dated and discount 4500
	+ Rated speed rpm : 1500
	+ rack travel mm : 12.90
control lever	+ Tolerance mm : +- 0.10
position degree : 50.0	+
• • • • • • • • • • • • • • • • • • • •	Rated speed rpm : 1900
Rated speed rpm : 2200	+ rack travel mm : 12.15
mack though mm + 9.70	rack travel mm : 12.15 Tolerance mm : + 0.10
rack travel mm : 8.30 Tolerance mm : + 0.20	T Total arice min : T U. 10
ioterance mm : +- U.ZU	T 2
	+ Rated speed rpm : 900
Rated speed rpm : 2600	+ rack travel mm : 11.15
rack travel mm : 0.50	Tolerance mm : +- 0.10
Tolerance mm : +- 0.50	+
101010100	
	ADJUSTMENT TEST ADA/ALDA
	T ADDODINENT LEGI ADA/ALDA

	1 6.1
CETTING	+ Del. quantity
SETTING	+ cm3/1000 strokes : 43.0
Rated speed rpm : 900	+ Tolerance + cm3/1000 strokes : +- 0.7
Rated speed rpm : 900 Ref. pressure	+ Check tolerance
ALDA / ADA hPa : 1600	+ cm3/1000s. : +- 1.7
rack travel mm : -0.25	+ Spreed
Tolerance mm : +- 0.20	† Tolerance
Toterarice man . +- 0.20	+ cm3/1000 strokes : 3.0
MEASUREMENT	Check tolerance
PICASOREPIEM	- cm3/1000s. : 3.5
Rated speed rpm : 900	T CIII37 10008. : 3.3
Ref. pressure	T Rof macoure
ALDA / ADA hPa : 1100	+ Ref. pressure + ALDA / ADA hPa : 1100
rack travel mm : -2.65	
	+ Rated speed rpm : 900
Tolerance mm : +- 0.10	+ Del. quantity
Dof management	- cm3/1000 strokes : 43.0
Ref. pressure ALDA / ADA hPa : 750	Tolerance
	- cm3/1000 strokes : +- 0.7
rack travel mm : -4.30	+ Check tolerance
Tolerance mm : +- 0.20	+ cm3/1000s. : +- 1.7
	Spreed
	+ Tolerance
FUEL A D. T. COLO. ALIANA ATTOTA A	+ cm3/1000 strokes : 3.0
FUEL DELIVERY CHARACTERISTICS	+ Check tolerance
	+ cm3/1000s. : 3.5
Ref. pressure	†
ALDA / ADA hPa : 1850	†
Rated speed rpm : 1500	
Del. quantity	+ HIGH IDLE
cm3/1000 strokes : 56.4	†
Tolerance	† Ref. pressure
cm3/1000 stroke: : +- 1.0	+ ALDA / ADA hPa : 1850
Check tolerance	+ Rated speed rpm : 2200
cm3/1000S. : +- 2.0	† rack travel mm : 8.30
Spreed	† Tolerance mm : +- 0.20
Tolerance	† Del. quantity
cm3/1000 strokes : 3.0	+ cm3/1000 strokes : 31.0
Check tolerance	† Tolerance
cm3/1000s. : 3.5	+ cm3/1000 strokes : +- 2.2
	† Check tolerance
Ref. pressure	+ cm3/1000s. : +- 3.2
ALDA / ADA hPa : 1850	+ Spreed
Rated speed rpm : 1900	† Tolerance
Spreed	+ cm3/1000 strokes : 3.0
Del. quantity	† Check tolerance
cm3/1000 strokes : 54.0	+ cm3/1000s. : 3.5
Tolerance	+
cm3/1000 strokes : +- 1.2	+
Check tolerance	+ STARTING FUEL DELIVERY
cm3/1000s. : +- 2.2	+
Spreed	+ Rated speed rpm : 100
Tolerance	rack travel mm : > 20.10
cm3/1000 strokes : 3.0	+ Del. quantity
Check tolerance	- cm3/1000 strokes : 52.8
cm3/1000s. : 3.5	† Tolerance
	+ cm3/1000 strokes : +- 4.0
Ref. pressure	+ Check tolerance
ALDA / ADA hPa : 1100	+ cm3/1000s. : $+$ 5.0
Rated speed rpm : 900	∔ Spreed
nated speed rpm . 700	

Tolerance
cm3/1000 strokes : 8.0
Check tolerance
cm3/1000s. : 8.5

LOW IDLE

Rated speed rpm : 375
Del. quantity
cm3/1000 strokes : 7.8
Check tolerance
cm3/1000s. : +- 2.3
Spreed

control lever position degree : > 42.00

: 1.5

Check tolerance

cm3/1000s.

control lever position degree : < 39.50

SETTING PNEUMATIC FAST IDLE (PLA) (PLA) POSITION

control lever
position degree : 12.0
tolerance degree : + 2.0

Rated speed rpm : 425

Rack travel in mm: 7.65
Tolerance mm: + 0.80
Del. quantity
cm3/1000 strokes: 17.3

Tolerance cm3/1000 strokes : +- 4.5

Check tolerance cm3/1000s. : +- 5.5 Vacuum hPa : 450.0

TESTING PNEUMATIC SHUTOFF DEVICE

Rated speed rpm : 375 Vacuum hPa : -450.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 25.08.97 Test oil : ISO 4113

Combination No. : 0 400 074 884

Injection pump

Pump designation : PES4M55C32ORS184 EP type number : 0 410 054 938

Governor

Governer design. : RSF375/1900M77 Governer no. : 0 420 021 273

Cust. part No. :

Customer-spec. information
Customer : MB-PKW
Motor : OM601-2.3L
Power KW : 58.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 469 990 351

Inlet press. bar : 1.0

Test nozzle holde

assembly : 1 688 901 111

Opening pressure

bar : 148.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.05
Tolerance mm : +- 0.05
Check
tolerance mm : +- 0.10

Rack travel in mm : 21.00 Tolerance mm : + 1.00

Firing order : 1- 3- 4- 2

Phasing : 0-90-180-270

Start of delivery blocking

*NW after s.o.d. : 16.50 Tolerance : + 0.20

Check

tolerance $^{\circ}NW$: \leftarrow 0.30

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 12.35 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 39.4

Tolerance

cm3/1000 strokes : +- 0.5

Check tolerance cm3/1000s.

cm3/1000s. : + 1.5

Spreed Tolerance

cm3/1000 strokes : 2.5

G14

Check tolerance	+
cm3/1000s. : 3.0	SET IDLE CONTROL LEVER POSITION
Rated speed rpm : 375	Rated speed rpm : 1000
Rack travel in mm: 4.70 Tolerance mm: + 0.10 Del. quantity	CRT mm max. : 1.45
cm3/1000 strokes : 6.5 Tolerance	1011 701 5
cm3/1000 strokes : +- 0.5 Spreed	+ LOW IDLE
Tolerance cm3/1000 strokes : 1.0	control lever position degree : 14.0 tolerance degree : + 2.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Setting point w/out bumper spring Rated speed rpm : 375 rack travel mm : 4.70
IDLE STAGE	SET IDLE AUXILIARY SPRING
Rack travel in mm : 6.25 Tolerance mm : + 0.25	Rated speed rpm : 450 rack travel mm : 3.40 Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Load pick-up
	Rated speed rpm : 200
Rated speed rpm : 1000 Ref. pressure	+ rack travel mm : 13.75
ALDA / ADA hPa : 1100 Del. quantity	Rated speed rpm : 1000
cm3/1000 strokes : 39.4 Tolerance	CRT mm max. : 1.45
cm3/1000 strokes : +- 0.5 Check tolerance	rack travel mm : 4.70 Rated speed rpm : 375
cm3/1000s. : +- 1.5 Spreed	‡
Tolerance cm3/1000 strokes : 2.5 Check tolerance	TORQUE CONTROL
cm3/1000s. : 3.0	Rated speed rpm : 1000 rack travel mm : 12.35 Tolerance mm : +- 0.05
RATED SPEED	Rated speed rpm : 1850
control lever position degree : 50.0	Rated speed rpm : 1850 rack travel mm : 12.30 Tolerance mm : +- 0.10
Rated speed rpm : 2200 rack travel mm : 5.60 Tolerance mm : +- 0.25	ADJUSTMENT TEST ADA/ALDA SETTING
Rated speed rpm : 2400 rack travel mm : 0.50 Tolerance mm : +- 0.50	Rated speed rpm : 1000 Ref. pressure ALDA / ADA hPa : 940 rack travel mm : -0.10 Tolerance mm : +- 0.10

	1	Del. quantity	
MEASUREMENT	Ţ	cm3/1000 strokes	. 50 9
MEASUREMEIAI	Ť		. 39.0
Dahad awasal sus	1000	Tolerance	
Rated speed rpm	: 1000 +	cm3/1000 strokes	: +- 4.0
Ref. pressure	, , , , , , , , , , , , , , , , , , ,	Check tolerance	
ALDA / ADA hPa	: 900	cm3/1000s.	: +- 5.0
rack travel mm	: -0.40	Spreed	
Tolerance mm	: +- 0.10 +	Tolerance	
	+	cm3/1000 strokes	: 8.0
Ref. pressure	+	Check tolerance	
ALDA / ADA hPa	: 750	cm3/1000s.	: 8.5
rack travel mm	: -1.50		
Tolerance mm	: ← 0.20 +		
	+		
	+		
		LOW IDLE	
FUEL DELIVERY CHAP	RACTERISTICS +		
	1	Rated speed rpm	: 375
Ref. pressure	1	Del. quantity	
ALDA / ADA hPa	: 1100	cm3/1000 strokes	: 7.8
Rated speed rpm		Check tolerance	
Del. quantity	· 1050	cm3/1000s.	: +- 2.3
cm3/1000 strokes	· 420	Spreed	
Tolerance	. 42.0	Check tolerance	
cm3/1000 strokes	. + 10	cm3/1000s.	: 1,5
	. — 1.0	CIII37 10005.	; 1,5
Check tolerance cm3/1000s.	1 20		
	: +- 2.0 +		
Spreed	†		
Tolerance	<u> </u>		
cm3/1000 strokes	: 2.5		
Check tolerance	+		
cm3/1000s.	: 3.0 +	control lever	
	+	position degree	: > 47.00
	+		
			
HIGH IDLE	+	control lever	
	+	position degree	: < 44.50
Ref. pressure	+		
ALDA / ADA hPa	: 1100 +		
Rated speed rpm	: 2200 +	SETTING PNEUMATIC	FAST IDLE (PLA)
rack travel mm	: 5.60	(PLA) POSITION	
Tolerance mm	: ← 0.25		
Del. quantity	 		
cm3/1000 strokes	: 16.0	control lever	
Tolerance	1	position degree	: 14.0
cm3/1000 strokes	: ← 2.0 [↓]	tolerance degree	
Check tolerance	1		
cm3/1000s.	: +- 3.0	Rated speed rpm	: 425
Spreed		marca opeca m	, 25
Tolerance	1	Rack travel in mm	. 7.00
cm3/1000 strokes	: 2.5	Tolerance mm	
Check tolerance	· T	Del. quantity	0.00
cm3/1000s.	: 3.0	cm3/1000 strokes	: 15.3
CIII37 10003.	: 3.0	Tolerance	. 19.9
		cm3/1000 strokes	75
CTARTING FUEL SELE	TUEDY		. +- 3.3
STARTING FUEL DELI	LVERT	Check tolerance	/ 5
Ochod	. 100	cm3/1000s.	: +- 4.5
Rated speed rpm		Vacuum hPa	: 450.0
rack travel mm			
Tolerance mm	: +- 1.50 +		

TESTING PNEUMATIC SHUTOFF DEVICE

Rated speed rpm : 375 Vacuum hPa : -450.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 06.09.96 : ISO 4113

Combination No.

: 0 401 846 994

Injection pump

Pump designation : PE6P110A320RS3374 EP type number : 0 411 816 800

Governor

Governer design. : RQV300...1100PA1182

Governer no. : 0 421 814 110

Cust. part No. : 11032709 PO1 v.08.96

Customer-spec. information

Customer : VCE

: TD63KBE LAD.L90C Motor

Power KW : 118.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration

damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C Tolerance *C : +- 2.0

Overflow valve : 2 417 413 046

Inlet press. bar : 1.5 Tolerance bar : +- 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.45 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 11.00 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

: +- 0.30 Tolerance

Check

tolerance °NW : +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1025

Rack travel in mm : 12.00 Tolerance mm : +- 0.05

	‡ guide sleeve
Del. quantity	travel mm : 3.11
cm3/1000 strokes : 140.0	Tolerance mm : +- 0.25
CHD7 1000 Strokes . 140.0	Toterance min . += 0.25
* 1	1700
Tolerance	+ Rated speed rpm : 1390
cm3/1000 strokes : +- 1.0	† guide sleeve
	+ travel mm : 11.50
Check tolerance	+ Tolerance mm : +- 0.50
cm3/1000s. : +- 3.0	+
Spreed	4 GUIDE SLEEVE POSITION
opi ced	1
Tolerance	
	T
cm3/1000 strokes : 6.0	+ control lever
	+ position degree : - 1
Check tolerance	+ Rated speed rpm : 1229
cm3/1000s. : 10.0	+
	+ Rack travel in mm : 11.30
	+ Tolerance mm : +- 1.30
Rated speed rpm : 300	
	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 5.80	I TOLL LOAD DELIVERY AT TOLL LOAD STOP
	T Batad and Jane 1025
Tolerance mm : +- 0.20	+ Rated speed rpm : 1025
Del. quantity	+ Aneroid pressure
cm3/1000 strokes : 26.0	† hPa : 1500
Tolerance	† Del. quantity
cm3/1000 strokes : +- 2.0	+ cm3/1000 strokes : 140.0
Check tolerance	+ Tolerance
cm3/1000s. : +- 5.0	+ cm3/1000 strokes : +- 1.0
Spreed	+ Check tolerance
Tolerance	$+ \frac{\text{cm}}{3}/1000\text{s}. : + 3.0$
cm3/1000 strokes : 4.0	+ Spreed
Check tolerance	+ Tolerance
cm3/1000s. : 6.0	+ cm3/1000 strokes : 6.0
	+ Check tolerance
	+ cm3/1000s. : 10.0
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	
WITT GOVERNOON	
	CONTROL LEVER
GUIDE SLEEVE TRAVEL	T CONTROL LEVER
GOIDE SCEENE INVANER	T annual laws
4470	+ control lever
Rated speed rpm : 1172	+ position degree : 49.0
guide sleeve	+ tolerance degree : +- 4.0
travel mm : 8.69	+
Tolerance mm : ← 0.15	+ control lever
	position degree : 117.0
Rated speed rpm : 300	tolerance degree : +- 4.0
guide sleeve	The state of the s
travel mm : 1.48	RATED SPEED
Tolerance mm : + 0.20	rack travel mm : 11.00
	+ Rated speed rpm : 1160
Rated speed rpm : 822	+ Tolerance 1/min : +- 5
guide sleeve	+
travel mm : 5.40	+ rack travel mm : 4.00
Tolerance mm : +- 0.25	+ Rated speed rpm : 1250
	+ Tolerance 1/min : + 15
Rated speed rpm : 510	1
naced speed (pill + 210	rack travel mm : 0.50
	T TACK CLAVEL IIIII . U.JU

Tolerance mm Rated speed rpm		Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: -
LOW IDLE		MEASUREMENT	
control lever		Rated speed rpm	: 625
position degree tolerance degree	: 85.0 : +- 4.0	Pressure hPa rack travel mm Tolerance mm	: 2.60
control lever position degree tolerance degree	: +- 4.0	Pressure hPa rack travel mm Tolerance mm	: 80 : 0.25 : +- 0.05
Setting point w/or		Chart interded	
Rated speed rpm		+ Start interlock	
CRT mm min.	: > 8.61	Rated speed rpm Rated speed rpm	
Testing: Rated speed rpm	: 300	Check speed 1/min	: > 80
rack travel mm Tolerance mm	: 5.80 : + 0.20	Check speed 1/min	: < 240
Rated speed rpm	: 370	FUEL DELIVERY CHA	RACTERISTICS
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 12.00	Aneroid pressure hPa Rated speed rpm	
Rated speed rpm rack travel mm Tolerance mm	: 625 : 12.40 : +- 0.15	Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 153.0
Rated speed rpm rack travel mm Tolerance mm	: 820 : 12.30 : +- 0.10	Check tolerance cm3/1000s. Spreed Tolerance	: +- 5.0
Rated speed rpm rack travel mm Tolerance mm	: 625 : 12.60 : +- 0.10	cm3/1000 strokes Check tolerance cm3/1000s.	: 4.0 : 6.0
ANEROID/ALTITUDE		Aneroid pressure	: -
COMPENSATOR TEST		Rated speed rpm Del. quantity	
SETTING		+ cm3/1000 strokes + Tolerance	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 625 : 1500 : 12.40 : +- 0.05	cm3/1000 strokes Check tolerance cm3/1000s.	: +- 1.0 : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm	:		100
rack travel mm	:		9.40
Tolerance mm	:	+-	0.20
Del. quantity			
cm3/1000 strokes	:		103.0
Toterance			
cm3/1000 strokes	:	+-	10.0
Check tolerance			
cm3/1000s.		+-	14 N

LOW IDLE

Rated speed rpm	:	300	
Rack travel in mm Tolerance mm Del. quantity	: +-	5.80 0.20	
7.4600	:	26.0	
cm3/1000 strokes	: +-	2.0	
Check tolerance cm3/1000s. Spreed	; +-	5.0	
Tolerance cm3/1000 strokes Check tolerance	:	4.0	
cm3/1000s.	:	6.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 28.08.97 Test oil : ISO 4113

Combination No. : 0 402 646 626

Injection pump

Pump designation : PE6P12OA32ORS7299 EP type number : 0 412 626 885

Governor

Governer design. : RQV275...1000PA1076K

Governer no. : 0 421 815 357

Cust. part No. : 1280160

Customer-spec. information Customer : DAF Motor : WS 268 M Power KW : 268.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5
Tolerance bar : +- 0.1

Overflow quantity
min. l/h : 160
Tolerance l/h : + 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke min : 4.85
Tolerance mm : + 0.05 Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240 : -300

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 980

Rack travel in mm : 13.55 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 250.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Charle Astronomes		1
Check tolerance cm3/1000s.	: +- 4.0	Rated speed rpm : 390
CIII-27 TOOOS .	. + 4.0	guide sleeve
Spreed		+ travel mm : 3.79
0,000		+ Tolerance mm : +- 0.25
Tolerance		+
cm3/1000 strokes	: 5.0	+ Rated speed rpm : 1310
		+ guide sleeve
Check tolerance	0.0	+ travel mm : 13.50
cm3/1000s.	: 9.0	+ Tolerance mm : +- 0.50
		Ī
		GUIDE SLEEVE POSITION
Rated speed rpm	: 275	+
		1
Rack travel in m		+ control lever
Tolerance mm	: +- 0.10	position degree : - 1
Del. quantity	. 47.6	Rated speed rpm : 1130
cm3/1000 strokes Tolerance	: 17.0	Rack travel in mm : 12.60
cm3/1000 strokes	: +- 3.0	+ Tolerance mm : +- 1.30
Check tolerance		Total de limit . *= 1.50
cm3/1000S.	: +- 6.0	
Spreed		FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance	0 -	†
cm3/1000 strokes	: 8.0	+ Rated speed rpm : 980
Check tolerance	: 12.0	Aneroid pressure
cm3/1000s.	: 12.0	+ hPa : 1500 + Del. quantity
		cm3/1000 strokes : 250.0
(P) SETTING OF IN	NUECTION PUMP	+ Tolerance
WITH GOVERNOR		+ cm3/1000 strokes : + 1.0
		+ Check tolerance
		+ cm3/1000s. : + 4.0
GUIDE SLEEVE TRAN	VEL	+ Spreed
Rated speed rpm	: 1045	+ Tolerance + cm3/1000 strokes : 5.0
guide steeve	. 1072	Check tolerance
travel mm	: 9.82	+ cm3/1000s. : 9.0
Tolerance mm	: +- 0.20	+
		+
Rated speed rpm	: 275	+
guide sleeve	. 3 1:	CONTROL LEVER
travel mm Tolerance mm	: 2.14 : + 0.15	t control lever
to cerdiffe this	0.15	position degree : 120.0
Rated speed rpm	: 689	tolerance degree : +- 4.0
guide sleeve		+
travel mm	: 6.43	RATED SPEED
Tolerance mm	: +- 0.25	rack travel mm : 12.55
0-4-4	. 29/	Rated speed rpm : 1042
Rated speed rpm	: 284	Tolerance 1/min : +- 5
guide sleeve travel mm	: 2.27	rack travel mm : 4.00
Tolerance mm	: +- 0.25	Rated speed rpm : 1160
. T TT TT TET TIME		+ Tolerance 1/min : +- 15
Rated speed rpm	: 334	+
guide sleeve		rack travel mm : 0.70
travel mm	3.17	Tolerance mm : +- 0.70
Tolerance mm	: +- 0.25	+ Rated speed rpm : 1275

LOW IDLE

control lever

position degree : 74.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 175

CRT mm min. : > 7.50

Testing:

Rated speed rpm : 275
rack travel mm : 4.80
Tolerance mm : +- 0.10

Rated speed rpm : 275

TORQUE CONTROL

Rated speed rpm : 980 rack travel mm : 13.55 Tolerance mm : + 0.05

Rated speed rpm : 750 rack travel mm : 13.05 Tolerance mm : + 0.05

Rated speed rpm : 600 rack travel mm : 12.10 Tolerance mm : +- 0.10

Rated speed rpm : 500 rack travel mm : 11.70 Tolerance mm : +- 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 980
Pressure hPa : 1500
rack travel mm : 13.55
Tolerance mm : +- 0.05

Rated speed rpm : 980
Pressure hPa : rack travel mm : 8.60
Tolerance mm : +- 0.10

MEASUREMENT

Rated speed rpm : 980

Pressure hPa : 720 rack travel mm : 12.25 Tolerance mm : +- 0.05

Pressure hPa : 360 rack travel mm : 9.80 Tolerance mm : +- 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure : 1500 Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 263.0 Tolerance cm3/1000 strokes : \leftarrow 2.0 Check tolerance cm3/1000s. : +- 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0

Aneroid pressure
hPa : Rated speed rpm : 600
Del. quantity
cm3/1000 strokes : 154.0
Tolerance
cm3/1000 strokes : + 1.0
Check tolerance
cm3/1000s. : + 4.0

LOW IDLE

Rated speed rpm : 275

Rack travel in mm : 4.80
Tolerance mm : +- 0.10
Del. quantity
cm3/1000 strokes : 17.0
Tolerance
cm3/1000 strokes : +- 3.0

Check tolerance cm3/1000s. : +- 6.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 01.09.97 : ISO 4113

Combination No. : 0 402 646 678

Injection pump

Pump designation : PE6P120A720RS7441 EP type number : 0 412 626 967

Governor

Governer design. : RQV250...1050PA1354

Governer no. : 0 421 814 199

Cust. part No. :

Customer-spec. information Customer : MIELEC Motor : MD 111E Power KW : 225.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.5 Tolerance bar : + 0.1 Inlet press. bar :

Overflow quantity

min. l/h : 240 Tolerance l/h: + 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.40 Tolerance mm : +- 0.05 Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 20.25 Tolerance mm : +- 0.75

Firing order : 1-5- 3- 6- 2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 12.45 Tolerance mm : +- 0.05

	+ guide sleeve
Del. quantity	travel mm : 3.23
cm3/1000 strokes : 216.0	1
CIIDY TUUU STROKES ; 210.0	† Tolerance mm : +- 0.25
	4770
Tolerance	+ Rated speed rpm : 1330
cm3/1000 strokes : + 1.0	+ guide sleeve
	+ travel mm : 11.50
Check tolerance	+ Tolerance mm : + 0.50
cm3/1000s. : + 4.0	Total arise min
· · · · · · · · · · · · · · · · · · ·	
Spreed	GUIDE SLEEVE POSITION
Spi eed	T GOIDE SPEEDE LOSTITON
	†
Tolerance	†
cm3/1000 strokes : 5.0	+ control lever
	position degree : - 1
Check tolerance	Rated speed rpm : 1175
cm3/1000s. : 9.0	
. , , , ,	Rack travel in mm : 11.45
	Tolerance mm : +- 1.30
270	<u>†</u>
Rated speed rpm : 250	
	+ FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 6.10	+
Tolerance mm : +- 0.10	+ Rated speed rpm : 1050
Del. quantity	+ Aneroid pressure
cm3/1909 strokes : 13.5	- hPa : 1500
Tolerance	
	Del. quantity
cm3/1000 strokes : + 2.0	+ cm3/1000 strokes : 216.0
Check tolerance	+ Tolerance
cm3/1000s. : + 5.0	+ cm3/1000 strokes : +- 1.0
Spreed	+ Check tolerance
Tolarance	+ cm3/1000s. : +- 4.0
cm3/1000 strokes : 8.0	Spreed
Check tolerance	Tolerance
cm3/1000s. : 12.0	+ cm3/1000 strokes : 5.0
	+ Check tolerance
	+ cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP	1
WITH GOVERNOR	1
WETT GOVERNOON	
	CONTROL LEVER
CUINE CLEEVE TRAVEL	T CONTROL LEVER
GUIDE SLEEVE TRAVEL	T control loves
0-1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	t control lever
Rated speed rpm : 1125	+ position degree : 57.0
guide sleeve	+ tolerance degree : +- 4.0
travel mm : 8.84	+
Tolerance mm : + 0.15	+ control lever
The second secon	position degree : 119.0
Rated speed rpm : 250	tolerance degree : + 4.0
	T coterance degree . 4.0
guide steeve	T DATE: OFFE
travel mm : 1.26	+ RATED TEED
Tolerance mm : + 0.20	+ rack travel mm : 11.40
	+ Rated speed rpm : 1113
Rated speed rpm : 777	+ Tolerance 1/min : +- 5
guide sleeve	1
travel mm : 5.55	rack travel mm : 4.00
Tolerance mm : +- 0.25	Rated speed rpm : 1205
	+ Tolerance 1/min : + 15
Rated speed rpm : 460	+
	+ rack travel mm : 0.50

Tolerance mm Rated speed rpm	: +- 0.50 : 1300
LOW IDLE	
control lever position degree tolerance degree	: 83.0 : +- 4.0
control lever position degree tolerance degree	: 21.0 : +- 4.0
Setting point w/o	ut bumper spring
Rated speed rpm	: 150
CRT mm min.	: > 8.40
Testing:	
Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm	: 310
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1050 : 12.45 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 500 : 12.45 : +- 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 12.45 : + 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 11.30 : +- 0.20
MEASUREMENT	

Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 475 : 11.70 : +- 0.15
Pressure hPa rack travel mm Tolerance mm	: 550 : 12.15 : +- 0.05
Start interlock	
Rated speed rpm Rated speed rpm	: > 100 : < 170
Check speed 1/min	: > 80
Check speed 1/min	: < 190
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	
Check tolerance cm3/1000s.	: +- 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: - : 500 : 168.0 : + 1.0
Check tolerance cm3/1000s.	: +- 4.0
STARTING FUEL DEL	
Rated speed rpm	: 100 : 16.00

varen sheen thii	•	100
rack travel mm	:	16.00
Del. quantity		
cm3/1000 strokes	:	285.0
Tolerance		
cm3/1000 strokes	: +-	- 15.0
Check tolerance		
cm3/1000s.	: +-	- 19.0

LOW IDLE

Rated speed rpm	:	250	
Rack travel in mm Tolerance mm Del. quantity	: +-	6.10 0.10	
cm3/1000 strokes	:	13.5	
Tolerance cm3/1000 strokes	: +	2.0	
Check tolerance cm3/1000s. Spreed	: +-	5.0	
Tolerance cm3/1000 strokes Check tolerance	•	٥.٥	
cm3/1000s.	:	12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 28.08.97 Test oil : ISO 4113

Combination No. : 0 402 678 812

Injection pump

Pump designation : PE8P120A320LS7801-2

EP type number : 0 412 628 825

Governor

Governer design. : RSV350...1050P0A535

: -2

Governor ro. : 0 421 833 318

Cust. part No. :

Customer-spec. information Customer : MB-NFZ : 0M442A Motor

Power KW : 260.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

40 temp. °C : +- 2.0 Tolerance °C

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Overflow quantity min. l/h : 110
Tolerance l/h : + 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 2.5 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure ban : Tolerance bar : +- 1.0

Prestroke mm : 5.25 Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Firing order : 8-7-2-6-3

: - 5- 4- 1

Phasing : 0-45-90-135-180 : -225-270-315

Tolerance : +- 0.50

Check

tolerance *NW : **←** 0.75

BASIC SETTING

Rated speed rpm : 1030

Rack travel in mm : 12.85 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 180.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

: +- 4.0 cm3/1000s.

Spreed

	+
Tolerance cm3/1000 strokes : 5.0	CONTROL LEVER
Check tolerance cm3/1000s. 9.0	control lever position degree : 94.0 tolerance degree : +- 4.0
Rated speed rpm : 350	RATED SPEED rack travel mm : 11.80 Rated speed rpm : 1075
Rack travel in mm : 5.70 Tolerance mm : + 0.10	Tolerance 1/min : +- 5
Del. quantity cm3/1000 strokes : 18.0 Tolerance	rack travel mm : 4.00 Rated speed rpm : 1145 Tolerance 1/min : +- 15
cm3/1000 strokes : +- 3.0 Check tolerance	rack travel mm : 0.85
cm3/1000S. : +- 6.0 Spreed Tolerance	Tolerance mm : +- 0.55 Rated speed rpm : 1400
cm3/1000 strokes : 8.0 Check tolerance	
cm3/1000s. : 12.0	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 72.0 tolerance degree : + 4.0
GUIDE SLEEVE POSITION	Setting point w/out bumper spring
control lever position degree : - 3	Rated speed rpm : 100 CRT mm min. : > 19.50
Rated speed rpm : 800 Rack travel in mm : 0.50	Testing:
Rack travel in mm : 0.50	
Tolerance mm : +- 0.20	Rated speed rpm : 350 rack travel mm : 5.70 Tolerance mm : + 0.10
	rack travel mm : 5.70 Tolerance mm : + 0.10
Tolerance mm : +- 0.20 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1030 Aneroid pressure	rack travel mm : 5.70
Tolerance mm : +- 0.20 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1030 Aneroid pressure hPa : 1100 Del. quantity	rack travel mm : 5.70 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 400
Tolerance mm : +- 0.20 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1030 Aneroid pressure hPa : 1100 Del. quantity cm3/1000 strokes : 180.0 Tolerance cm3/1000 strokes : +- 1.0	rack travel mm : 5.70 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 400 Tolerance 1/min : + 35
Tolerance mm : +- 0.20 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1030 Aneroid pressure hPa : 1100 Del. quantity cm3/1000 strokes : 180.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed	rack travel mm : 5.70 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 400 Tolerance 1/min : + 35 SET IDLE AUXILIARY SPRING Rated speed rpm : 100 TORQUE CONTROL Rated speed rpm : 1030
Tolerance mm : + 0.20 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1030 Aneroid pressure hPa : 1100 Del. quantity cm3/1000 strokes : 180.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0	rack travel mm : 5.70 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 400 Tolerance 1/min : + 35 SET IDLE AUXILIARY SPRING Rated speed rpm : 100 TORQUE CONTROL

Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 950 : 13.20 : ← 0.10 : 830 : 13.90 : ← 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 500 : -
MEASUREMENT	
Pressure hPa rack travel mm Tolerance mm	: 420 : 0.80 : +- 0.05
	: 575
Pressure hPa rack travel mm Tolerance mm FUEL DELIVERY CHA	: 1.90 : +- 0.20
rack travel mm Tolerance mm FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance	: 1.90 : +- 0.20 RACTERISTICS : 1100 : 700 : 212.0 : +- 2.0 : +- 5.0 : 8.0
rack travel mm Tolerance mm Tolerance mm FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 1.90 : +- 0.20 RACTERISTICS : 1100 : 700 : 212.0 : +- 2.0 : +- 5.0

Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	:		8.0 12.0	
STARTING FUEL DELI	ΙVΙ	ERY		
Rated speed rpm	:		100	
Del. quantity cm3/1000 strokes	:		190.0	
Tolerance cm3/1000 strokes	:	+-	10.0	
Check tolerance cm3/1000s.	:	+-	14.0	
LOW IDLE	•		350	
Raced Speed (pill	•		370	
			C 70	
Rack travel in mm Tolerance mm	:	+	5.70 0.10	
Tolerance mm Del. quantity cm3/1000 strokes	:	+		
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	:	+	0.10	
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	:	+	0.10	
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	•	+	0.10 18.0 3.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 28.08.97 : ISO 4113

Combination No. : 0 402 678 839

Injection pump

Pump designation : PE8P120A320LS7912 EP type number : 0 412 628 927

Governor

Governer design. : RSV550...1050P0A681

Governer no. : 0 421 833 600

Cust. part No. : 028 074 2802

Customer-spec. information

Customer : MB-NFZ Motor

: OM402LA, Euro

Power KW : 280.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0 40

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0 Tolerance bar : \leftarrow 0.1

Overflow quantity min. l/h : 120 Tolerance l/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.55 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 20.50 Tolerance mm : +- 0.50

Firing order : 8-7-2-6-3

: - 5- 4- 1

Phasing : 0-45-90-135-180

: -225-270-315 : +- 0.50

Tolerance Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance °NW : + 0.75

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 1030

Rack travel in mm : 13.70 Tolerance mm : +- 0.05	Aneroid pressure hPa : 1000 Del. quantity
Del. quantity cm3/1000 strokes : 208.0	cm3/1000 strokes : 208.0 + Tolerance + cm3/1000 strokes : + 1.0
Tolerance cm3/1000 strokes : + 1.0	Check tolerance cm3/1000s. : +- 4.0 Spreed
Check tolerance	Tolerance cm3/1000 strokes : 5.0
cm3/1000s. : +- 4.0	Check tolerance cm3/1000s. : 9.0
Spreed	‡
Tolerance cm3/1000 strokes : 5.0	CONTROL LEVER
Check tolerance cm3/1000s. : 9.0	control lever position degree : 88.0 tolerance degree : +- 4.0
Rated speed rpm : 550	ASSEMBLY GOVERNOR SETTING
Rack travel in mm : 4.10 Tolerance mm : +- 0.10 Del. quantity	Rated speed rpm : 1070 Tolerance 1/min : +- 1 rack travel mm : 12.70
cm3/1000 strokes : 18.0 Tolerance	+ Rated speed rpm : 1110
<pre>cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0</pre>	Tolerance 1/min : +- 4 rack travel mm : 4.00
cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1300
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1071 Tolerance 1/min : + 1 rack travel mm : 12.70
GUIDE SLEEVE POSITION	Rated speed rpm : 1111 Tolerance 1/min : + 4 rack travel mm : 4.00
	rack travel mm : 0.85 Tolerance mm : +- 0.55
control lever position degree : - 3 Rated speed rpm : 800	Rated speed rpm : 1072
Rack travel in mm : 0.50 Tolerance mm : ← 0.20	Tolerance 1/min : + 1 rack travel mm : 12.70
	Rated speed rpm : 1112 Tolerance 1/min : + 4
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 4.00
Rated speed rpm : 1030	rack travel mm : 0.85 Tolerance mm : +- 0.55

		+	
Rated speed rpm	. 1073	SET IDLE AUXILIAR	Y SPRING
Tolerance 1/min	: +- 1	rack travel mm	: 2.00
Rated speed rpm	: 1113	TORQUE CONTROL	
Tolerance 1/min	: +- 4	+ Rated speed rpm	: 1030 : 13.70
rack travel mm	: 4.00	rack travel mm Tolerance mm	: 13.70 : +- 0.05
rack travel mm	: 0.85	+	
Tolerance mm	: +- 0.55	+ Rated speed rpm	: 600 : 14.70
		rack travel mm Tolerance mm	: + 0.10
Rated speed rpm Tolerance 1/min	: 1074 : +- 1	+ Dated aread are	. 000
rack travel mm	: 12.70	Rated speed rpm rack travel mm	: 14.20
	AAA /	+ Tolerance mm	: ← 0.10
Rated speed rpm Tolerance 1/min	: +- 4		·
rack travel mm	: +- 4 : 4.00	ANEROID/ALTITUDE	
rack travel mm	. 0.85	COMPENSATOR TEST	
rack travel mm Tolerance mm	: + 0.55	1	
		SETTING	
Rated speed rpm	: 1075	Rated speed rpm	: 450
Tolerance 1/min	: +- 1	+ Pressure hPa	: 1000
rack travel mm	: 12.70	rack travel mm Tolerance mm	: 14.70 : + 0.15
Rated speed rpm	: 1115	+	
Tolerance 1/min rack travel mm	: +- 4	Rated speed rpm	: 450
Lack Claves with	. 4.00	Pressure hPa rack travel mm Tolerance mm	12.40
rack tra∨el mm Tolerance mm	: 0.85	† Tolerance mm	: +- 0.15
roterance imi	. += 0.55	T MEASUREMENT	
LOW IDLE		+ Rated speed rpm	: 450
FOM TOPE		+ Rated speed rpill	. 450
and all town		+ Pressure hPa	: 750
control lever position degree	; 71.0	rack travel mm Tolerance mm	: 14.00 : ← 0.15
tolerance degree	: + 4.0	+	
Setting point w/ou	t bumper spring	+ Pressure hPa + rack travel mm	: 650 : 13.40
		Tolerance mm	: + 0.15
Rated speed rpm	: 100	‡	
CRT mm min.	: > 19.50		
Testing:		FUEL DELIVERY CHA	RACTERISTICS
	550	+	
Rated speed rpm	: 550 : 4.10	+ Aneroid pressure + hPa	: 1000
	: +- 0.10	+ Rated speed rpm	
		+ Del. quantity + cm3/1000 strokes	. 2/0.0
rack travel mm Rated speed rpm	: 2.00 : 575	+ CM3/1000 Strokes + Tolerance	. 240.0
Tolerance 1/min	: +- 30	+ cm3/1000 strokes	: +- 2.0

Check tolerance cm3/1000s. Spreed	: +-	5.0
Tolerance cm3/1000 strokes Check tolerance	:	8.0
cm3/1000s.	:	12.0
Aneroid pressure		
hPa	:	-
Rated speed rpm Del. quantity	:	500
cm3/1000 strokes	:	170.0

hPa : Rated speed rpm : 500
Del. quantity
cm3/1000 strokes : 170.0
Tolerance
cm3/1000 strokes : +- 1.0
Check tolerance
cm3/1000s. : +- 4.0
Spreed
Tolerance
cm3/1000 strokes : 8.0
Check tolerance
cm3/1000 strokes : 8.0
Check tolerance
cm3/1000s. : 12.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 220.0
Tolerance
cn3/1000 strokes : +- 15.0
Check tolerance
cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm : 550 4.10 Rack travel in mm : Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 18.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. : +-6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance 12.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 28.08.97 Test oil : ISO 4113 : 28.08.97

Combination No. : 0 402 716 805

Injection pump

Pump designation : PES6P120A700LS7442 EP type number : 0 412 726 972

Governor

Governer design. : Governer no. :

Cust. part No. : 0280743902

Customer-spec. information Customer : MTU

Motor : 6R183-02 Power KW : 369.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0

Overflow quantity

min. l/h : 240 Tolerance l/h : ← 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 25.0 Tolerance bar : +- 1.0

Prestroke mm : 4.35 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 20.50

Tolerance mm : +- 0.50

Firing order : _6- 2- 4- 1- 5-

: 3

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : + 0.10

Check

tolerance °NW : +- 0.75

Barrel no. : 6

BASIC SETTING

Rated speed rpm : 750

Rack travel in mm : 7.80 Tolerance mm : + 0.05

H09

Del. quantity cm3/1000 strokes : 184.0
Tolerance cm3/1000 strokes : +- 1.0
Check tolerance cm3/1000s. : +- 4.0
Spreed
Tolerance cm3/1000 strokes : 5.0
Check tolerance cm3/1000s. : 9.0
Rated speed rpm : 300
Rack travel in mm : 4.10 Tolerance mm : +- 0.20
Del. quantity cm3/1000 strokes : 18.0
Tolerance cm3/1000 strokes : +- 3.0
Check tolerance cm3/1000s. : +- 6.0
Spreed Tolerance cm3/1000 strokes : 8.0
cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
(115) 10003.
(B) SETTING OF INJECTION PUMP WITH GOVERNOR
WITH GOVERNOR
FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 750
Aneroid pressure
Del. quantity cm3/1000 strokes : 184.0
Tolerance cm3/1000 strokes : +- 1.0
Check tolerance cm3/1000s. : +- 4.0
Spreed Tolerance
cm3/1000 strokes : 5.0 Check tolerance
cm3/1000s. : 9.0

LOW IDLE				
Testing:				
Rated speed rpm rack travel mm Tolerance mm	•	+-	300 4.10 0.20	
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	• • • • • • • • • • • • • • • • • • • •	+-	750 7.80 0.05	
LOW IDLE				
Rated speed rom	:		300	
			500	
Rack travel in mm Tolerance mm Del. quantity	•	+-	4.10 0.20	
Tolerance mm		+-	4.10	
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	:	+-	4.10 0.20	
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	:	+-	4.10 0.20 18.0	
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	:	+-	4.10 0.20 18.0 3.0	
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	•	+-	4.10 0.20 18.0 3.0 6.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 01.09.97 : ISC 4113

Combination No. : 0 402 736 850

Injection pump

Pump designation : PES6P120A720/3LS7251

EP type number : 0 412 726 860

Governor

Governer design. : RQV300...1000PA962

: -11K

Governer no.

: C 421 815 410

Cust. part No. : 3-7372

Customer-spec. information Customer : MAN

Motor

: D2866LF09

Power KW

: 309.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C

Tolerance °C

: + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

Tolerance bar

: 208.5 : ← 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : +- 1.0

Prestroke mm : 4.85

Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 15.50 Tolerance mm : +- 0.50

Firing order : 6-2-4-1-5-

: 3

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : **←** 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 6

BASIC SETTING

Rated speed rpm	: 900	+ guide
		+ trave
Rack travel in m	n · 17 05	† Tolera
Tolerance mm	" : +- 0.05	Rated
TOTAL BLICE HAIL	0.05	- guide
Del. quantity		trave
cm3/1000 strokes	. 29/. 0	Tolera
CIII 7 1000 3 21 0 KC3	. 274.0	Toters
Tolerance		Rated
cm3/1000 strokes	: +- 1.0	guide
		+ trave
Check tolerance	Some Appay and desire spire systems (the edge objective) and established the spire spire spire spire spire spire	+ Tolera
cm3/1000s.	: +- 4.0	+
		+ Rated
Spreed		+ guide
		+ trave
Tolerance	40.0	+ Tolera
cm3/1000 strokes	: 10.0	†
Object A. Levi		Rated
Check tolerance	. 1/ 0	+ guide
cm3/1000s.	: 14.0	trave
		Tolera
		Rated
Rated speed rpm	: 300	guide
Marca opeca (pm		trave
Rack travel in m	m: 5.20	+ Tolera
Tolerance mm	· + 0.10	+
Del. quantity		ļ
cm3/1000 strokes	: 32.0	+ GUIDE
Tolerance		+
cm3/1000 strokes	: +- 3.0	+
Check tolerance	. •	+ contro
cm3/1000s.	: +- 6.0	+ posit
Spreed		Rated
Tolerance		T Door's a
cn3/1000 strokes Check tolerance	: 8.0	+ Rack 1
cm3/1000s.	: 12.0	Totera
CIII) 10003.	. 12.0	I
		FULL I
(B) SETTING OF I	NJECTION PUMP	+
WITH GOVERNOR		Rated
		+ Anero
		+ hPa
GUIDE SLEEVE TRA	VEL .	+ Del.
Ontrol or and or a	. 1057	+ cm3/10
Rated speed rpm	; 1057	+ Tolera
guide sleeve travel mm	: 8.74	+ cm3/10 + Check
Tolerance mm	: + 0.10	- cm3/10
TOTEL BLICE HAIL	, 0.10	Spreed
Rated speed rpm	: 300	+ Tolera
guide sleeve		cm3/10
travel mm	: 2.79	Check
Tolerance mm	_	+ cm3/10
		+
Rated speed rpm	: 810	+
		+

guide sleeve travel mm Tolerance mm	: 6.00 : +- 0.20
Rated speed rpm guide sleeve	: 330
travel mm Tolerance mm	: 3.33 : +- 0.20
Rated speed rpm guide sleeve	: 380
travel mm Tolerance mm	: 3.96 : +- 0.20
Rated speed rpm guide sleeve	: 490
travel mm Tolerance mm	: 4.33 : +- 0.20
Rated speed rpm guide sleeve	: 1211
travel mm Tolerance mm	: 12.00 : +- 0.20
Rated speed rpm guide sleeve	: 1300
travel mm Tolerance mm	: 13.50 : +- 0.50
GUIDE SLEEVE POSI	TION

control lever position degree : - 1 Rated speed rpm : 1160

Rack travel in mm : 13.00 Tolerance mm : +- 2.00

FULL LOAD DELIVERY AT FULL LOAD STOP

d speed rpm : 900 oid pressure : 1300 quantity 000 strokes : 294.0 ance 000 strokes : +- 1.0 tolerance 000s. : +- 4.0 d ance 000 strokes : 10.0 tolerance 000s. : 14.0

		+ rack travel mm	
CONTROL LEVER		Tolerance mm	: + 0.10
control lever position degree tolerance degree		ANEROID/ALTITUL COMPENSATOR TE	
RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min	: 1045	SETTING Rated speed rp. Pressure hPa rack travel mm	: 1300
rack travel mm Rated speed rpm Tolerance 1/min	: 1140	Tolerance mm	: + 0.05
rack travel mm Tolerance mm Rated speed rpm	: 0.50	+ Rated speed rpi + Pressure hPa - rack travel mm - Tolerance mm	: 9.20 : + 0.10
, ,		MEASUREMENT	
		Rated speed rp	m : 900
LOW IDLE		Pressure hPa rack travel mm Tolerance mm	: 11.90
control lever position degree tolerance degree		Pressure hPa rack travel mm Tolerance mm	: 220 : 9.45
Setting point w/o	out bumper spring		
Rated speed rpm	: 200	Start interloc	k
CRT mm min.	: > 7.30	Rated speed rp	
Testing: Rated speed rpm rack travel mm Tolerance mm	: 5.20	Check speed 1/min Check speed 1/min	: > 80 : < 260
Rated speed rpm	: 330	FUEL DELIVERY	CHARACTERISTICS
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm		Aneroid pressu hPa Rated speed rpi Del. quantity	: 1300 m : 1000
Rated speed rpm rack travel mm Tolerance mm	: 13.50	cm3/1000 stroke Tolerance cm3/1000 stroke	es : ∠69.0 es : ← 3.0
Rated speed rpm rack travel mm Tolerance mm		theck tolerance cm3/1000s.	e : +- 6.0
Rated speed rpm		Aneroid pressur hPa	re : 1300

Rated speed rpm	: 750
Del. quantity cm3/1000 strokes	: 287.0
Tolerance	
cm3/1000 strokes Check tolerance	: + 3.0
cm3/1000s.	: +- 6.0
Aneroid pressure	4700
hPa Rated speed rpm	: 1300 : 750
Del. quantity cm3/1000 strokes	: 107.0
Tolerance	
cm3/1000 strokes Check tolerance	: + 5.0
cm3/1000S.	: + 8.0
Spreed Tolerance	
cm3/1000 strokes	: 10.0
Check tolerance cm3/1000s.	: 14.0
Aneroid pressure	
hPa Rated speed rpm	: - 500
Del. quantity	
cm3/1000 strokes Tolerance	: 169.0
cm3/1000 strokes	: +- 1.0
Check tolerance cm3/1000s.	: +- 4.0
	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	
STARTING FUEL DEL	LVERY
Del. quantity	
cm3/1000 strokes Tolerance	: 210.0
cm3/1000 strokes	: +- 15.0
Check tolerance cm3/1000s.	: + 19.0
LOW IDLE	
Rated speed rpm	: 300
Rack travel in mm	: 5.20
Tolerance mm	: +- 0.10

Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0

End of test specification sheet

Tolerance

Del. quantity cm3/1000 strokes :

cm3/1000 strokes : \leftarrow 3.0

32.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 01.09.97

Test oil

: ISO 4113

Combination No. : 0 402 736 883

Injection pump

Page designation: PES6P120A720/3LS7251

: -1

EP 1908 ramber : 0 412 726 926

GOVERNA

Gowerner design. : RQV300...1000PA962

: -11K

Governer no.

: 0 421 815 410

Cust. part No. : 3-7398

Customer-spec. information

Customer : MAN

Motor

: D2866LFD9

Power KW

: 309.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar :

Tolerance bar : +- 0.1

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

208.5

Tolerance bar

: +- 1.5

Test Lines : 1 680 750 089

H15

Outside diameter : 8.0

x inside diameter :

3.0

x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +- 1.0

: 4.85 : +- 0.05 Prestroke mm Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm : 15.50 Tolerance mm : + 0.50

: 6-2-4-1-5-Firing order

: 3

: 0-60-120-180-240 Phasing

: -300

: +- 0.50 Tolerance

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance

: +- 0.50

Check

tolerance *NW

: +- 0.75

Barrel no.

: 6

	† Tolerance mm : +- 0.25
BASIC SETTING	Rated speed rpm : 810 guide sleeve
Rated speed rpm : 900	travel mm : 6.00
· · · · · · · · · · · · · · · · · · ·	Tolerance mm : +- 0.25
Rack travel in mm : 13.95	Rated speed rpm : 330
Tolerance mm : +- 0.05	<pre>+ guide sleeve + travel mm : 3.33 - Tolerance mm : +- 0.25</pre>
Del. quantity	Tolerance mm : + 0.25
cm3/1000 strokes : 294.0	+ 0.23
	+ Rated speed rpm : 380
Tolerance cm3/1000 strokes : +- 1.0	+ guide sleeve + travel mm : 3.96
CHIST TOOD SETONES : 1 1.0	Tolerance mm : +- 0.25
Check tolerance	+
cm3/1000s. : +- 4.0	Rated speed rpm : 490
Spreed	guide sleeve travel mm : 4.33
Spi eed	Tolerance mm : +- 0.25
Tolerance	Total unite min
cm3/1000 strokes : 10.0	Rated speed rpm : 1211
	+ guide sleeve
Check tolerance	travel mm : 12.00
cm3/1000s. : 14.0	† Tolerance mm : ← 0.25
	Rated speed rpm : 1300
	guide sleeve travel mm : 13.50
Rated speed rpm : 300	† travel mm : 13.50
Pools travel in many E 20	Tolerance mm : +- 0.50
Rack travel in mm : 5.20 Tolerance mm : +- 0.10	İ
Del. quantity	GUIDE SLEEVE POSITION
cm3/1000 strokes : 32.0	+
Tolerance	+
cm3/1000 strokes : +- 3.0	+ control lever
Check tolerance cm3/1000s. : +- 6.0	<pre>position degree : - 1 Rated speed rpm : 1160</pre>
Spreed	+ Rated speed (pill : //ou
Tolerance	Rack travel in mm : 13.00
cm3/1000 strokes : 8.0	+ Tolerance mm : +- 2.00
Check tolerance cm3/1000s. : 12.0	†
CIII37 10003 12.0	FULL LOAD DELIVERY AT FULL LOAD STOP
	+
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 900
WITH GOVERNOR	+ Aneroid pressure + hPa : 1300
	Del. quantity
GUIDE SLEEVE TRAVEL	+ cm3/1000 strokes : 294.0
	+ Tolerance
Rated speed rpm : 1057	- cm3/1000 strokes : + 1.0
guide sleeve travel mm : 8.74	+ Check tolerance + cm3/1000s. : +- 4.0
Tolerance mm : + 0.25	Spreed
	+ Tolerance
Rated speed rpm : 300	cm3/1000 strokes : 10.0
guide sleeve travel mm : 2.79	+ Check tolerance + cm3/1000s. : 14.0
CI QYEL (181)	F (1157 1000) 14.0

		Rated speed rpm rack travel mm Tolerance mm	: 750 : 6.50 : +- 0.10
CONTROL LEVER			. 0.10
control lever position degree tolerance degree	: 289.0 : + 4.0	ANEROID/ALTITUDE COMPENSATOR TEST	
RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min	: 12.40 : 1045 : + 5	SETTING Rated speed rpm Pressure hPa	: 900 : 1300
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : ¹140 : ← 15	rack travel mm Tolerance mm Rated speed rpm	: 13.95 : +- 0.05 : 900
rack travel mm Tolerance mm	: 0.50 : + 0.50	Pressure hPa rack travel mm Tolerance mm	: - : 9.20 : +- 0.10
Rated speed rpm	: 1300	MEASUREMENT	
		Rated speed rpm	: 900
LOW IDLE		Pressure hPa rack travel nm Tolerance mm	: 720 : 11.90 : +- 0.20
control lever position degree tolerance degree		Pressure hPa rack travel mm Tolerance mm	: 220 : 9.45 : +- 0.05
Setting point w/c	out bumper spring		
Rated speed rpm	: 200	Start interlock	
CRT mm min. Testing:	: > 7.30	Rated speed rpm Rated speed rpm	: > 100 : < 240
Rated speed rpm rack travel mm	: 5.20	Check speed 1/min Check	: > 80
Tolerance mm	: +- 0.10	speed 1/min	: < 260
Rated speed rpm	: 330	FUEL DELIVERY CHA	RACTERISTICS
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 900 : 13.95 : + 0.05	Aneroid pressure hPa Rated speed rpm	: 1300 : 1000
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 13.50 : +- 0.10	+ Del. quantity + cm3/1000 strokes + Tolerance + cm3/1000 strokes	
Rated speed rpm rack travel mm Tolerance mm	: 750 : 13.40 : ← 0.10	Check tolerance cm3/1000s.	: +- 6.0

Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1300 : 750 : 287.0 : + 3.0 : + 6.0		
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1300 : 750 : 107.0 : ← 5.0 : ← 8.0 : 10.0 : 14.0		
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - 500 : 169.0 : + 1.0 : + 4.0		
STARTING FUEL DELIVERY			
Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 210.0 : +- 15.0 : +- 19.0		
LOW IDLE			
Rated speed rpm	: 300		
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	: 5.20 : ← 0.10		

loterance		
cm3/1000 strokes	: +-	3.0
Check tolerance		
cm3/1000s.	: +-	6.0
Spreed		
Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance		
cm3/1000s.	:	12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 28.08.97 : ISO 4113

Combination No. : 0 402 746 604

Injection pump

Pump designation : PES6F120A720RS7366 EP type number : 0 412 726 933

Governor

Governer design. : RQV275...1100PA1208

: -1K

Governer no. : 0 421 815 492

Cust. part No. :

Customer-spec. information

Customer : IVECO-FRANCE

Motor

: 8460.41c-3000

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 2 417 413 076

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Overflow quantity

min. l/h : 160 Tolerance l/h : +- 10.0

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter :

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 20.50 Tolerance mm : - 0.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

: +- 0.50 Tolerance

Check

tolerance °NW

: +- 0.75

Start of delivery mark

Check

tolerance °NW : +- 0.40

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm : 11.30

Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes	: 201.0	Tolerance mm : +- 0.25
Tolerance		Rated speed rpm : 1440 guide sleeve
cm3/1000 strokes	: ← 1.0	travel mm : 13.50 Tolerance mm : +- 0.50
Check tolerance cm3/1000S.	: +- 4.0	
Spreed		GUIDE SLEEVE POSITION
Tolerance	†	aantaal lawaa
cm3/1000 strokes	: 5.0	control lever
chist todo strokes	: 5.0	position degree : - 1 Rated speed rpm : 1295
Check tolerance		Rated speed rpm : 1295
cm3/1000s.	: 9.0	Dock turned in an . 10 45
Cilia / Pucius .	; 9.0 †	Rack travel in mm : 10.65
		Tolerance mm : +- 2.70
	Ĭ	
Rated speed rpm	: 275	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm	i: 6.40	Rated speed rpm : 600
Tolerance mm	: + 0.10 +	Aneroid pressure
Del. quantity	+	hPa : 1200
cm3/1000 strokes	: 19.0	Del. quantity
Tolerance	1	cm3/1000 strokes : 201.0
cm3/10CO strokes	: - 3.0 }	Toterance
Check tolerance	+	cm3/1000 strokes : +- 1.0
cm3/1000s.	: +- 6.0	Check tolerance
Spreed	1	cm3/1000s. : +- 4.0
Tolerance	1	Spreed
cm3/1000 strakes	: 8.0	Tolerance
Check tolerance	1	cm3/1000 strokes : 5.0
cm3/1000s.	: 12.0	Check tolerance
	1	cm3/1000s. : 9.0
	1	
(B) SETTING OF IN	JECTION PUMP	***************************************
	+	CONTROL LEVER
GUIDE SLEEVE TRAV	EL +	control lever
	+	position degree : 118.0
Rated speed rpm	: 1180 +	tolerance degree : +- 4.0
guide sleeve	†	
travel mm	: 10.07	RATED SPEED
Tolerance mm	: +- 0.15 +	rack travel mm : 10.50
	+	Rated speed rpm : 1145
Rated speed rpm	: 275	Tolerance 1/min : + 5
guide sleeve	†	Check
travel mm	: 1.70 +	speed $1/\min$: +- 10
Tolerance mm	: ← 0.20 +	
	+	rack travel mm : 4.00
Rated speed rpm	: 802	Rated speed rpm : 1245
guide sleeve	+	Tolerance 1/min : +- 15
travel mm	: 6.49	Check
Tolerance mm	: +- 0.25	speed 1/min : + 20
Rated speed rpm	: 460	rack travel mm : 0.50
guide sleeve	+	Tolerance mm : + 0.50
travel mm	: 3.77	Rated speed rpm : 1350
	·	

LOW IDLE	
control lever position degree tolerance degree	: 75.0 : +- 4.0
Setting point w/c	out bumper spring
Rated speed rpm	: 175
CRT .mm min.	: > 7.90
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 275 : 6.40 : +- 0.10
Rated speed rpm	: 315
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 600 : 11.30 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm rack travel mm Tolerance mm	: 800 : 11.35 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1200 : 11.65 : + 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 9.30 : + 0.20
MEASUREMENT	

Pressure hPa	: 210
rack travel mm Tolerance mm	: 9.80 : +- 0.30
Pressure hPa rack travei mm	: 300 : 10.65
Tolerance mm	: +- 0.20
Start interlock	
Rated speed rpm Rated speed rpm	: > 180 : < 220
Check speed 1/min	: > 163
Check speed 1/min	: < 240
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	: 1200
Rated speed rpm	
Del. quantity	. 27/ 0
cm3/1000 strokes Tolerance	: 234.0
cm3/1000 strokes	: +- 3.0
Check tolerance cm3/1000s.	: +- 6.0
Cit. 57 100C0.	
Aneroid pressure	
Rated speed rpm	: 600
Del. quantity	440.0
cm3/1000 strokes Tolerance	: 142.0
cm3/1000 strokes	: +- 1.0
Check tolerance cm3/1000s.	: +- 4.0
CTANTIALS SUEL ASI	TUCOV
STARTING FUEL DEL	TAEKI
Set starting CRT	at K-cam.
Rated speed rpm	: 100
rack travel mm Tolerance mm	: 11.90 : +- 0.50
Del. quantity	
cm3/1000 strokes	: 110.0

Tolerance

cm3/1000 strokes : +- 15.0 Check tolerance cm3/1000s. : +- 19.0

Rated speed rpm : 500

LOW IDLE

Rated speed rpm	:		275
Rack travel in mm Tolerance mm	:	+-	6.40 0.10
Del. quantity cm3/1000 strokes Tolerance	:		19.0
cm3/1000 strokes Check tolerance	:	+-	3.0
cm3/1000s.	:	+	6.0
Tolerance cm3/1000 strokes			8.0
Check tolerance cm3/1000s.	:		12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 16.09.96 Edition Test oil : ISO 4113

Combination No. : 0 402 846 080

Injection pump

Pump designation : PE6P120A320RS804+ EP type number : 0 412 826 036

Governor

Governer design. : RQV300...1050PA1027K

Governer no. : 0 421 815 311

Cust. part No. : 11031995

: -PO1 V.08/96

Customer-spec. information

Customer : VCE
Motor : TD122KHE
Power KW : 209.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.50 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 11.00 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.30

Check

tolerance °NW : +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 800

Rack travel in mm : 10.00 Tolerance mm : \leftarrow 0.05

Del. quantity
Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : * 4.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 11.0 Check tolerance cm3/1000s. : 11.0 Rated speed rpm : 13.50 Tolerance mm : + 0.50 Control lever position degree : - 1 Rated speed rpm : 1234 Rack travel in mm : 9.40 Tolerance mm : + 1.30 Rated speed rpm : 300 Rated speed rpm : 800 FULL LOAD DELIVERY AT FULL LOAD STOP Rack travel in mm : 4.20 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 23.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : + 4.0 Check tolerance cm3/1000s. : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : + 1.0 (B) SETTING OF INJECTION PUMP
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FULL LOAD DELIVERY AT FULL LOAD STOP
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(B) SETTING OF INJECTION PUMP
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WITH GOVERNOR +
+ CONTROL LEVER
GUIDE SLEEVE TRAVEL +
+ control lever
Rated speed rpm : 1105 + position degree : 62.0
guide sleeve + tolerance degree : +- 4.0
travel mm : 9.77 +
Tolerance mm : + 0.15 + control lever
nonition domain 114 0
+ position degree : 116.0
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Rated speed rpm : 300 + tolerance degree : +- 4.0 quide sleeve
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Rated speed rpm : 300
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Rated speed rpm : 300 guide sleeve travel mm : 2.01 Tolerance mm : 4.00 Rated speed rpm : 775 Rated speed rpm : 775 guide sleeve travel mm : 6.42 tolerance degree : + 4.0 RATED SPEED rack travel mm : 9.30 Rated speed rpm : 1085 Tolerance 1/min : + 5 guide sleeve travel mm : 6.42
Rated speed rpm : 300 guide sleeve travel mm : 2.01 Tolerance mm : 4.00 Rated speed rpm : 775 guide sleeve travel mm : 6.42 Tolerance mm : 4.00 Tolerance mm : 4.00 Rated speed rpm : 1085 Tolerance 1/min : 4.00 Tolerance mm : 4.00 Rated speed rpm : 1155
Rated speed rpm : 300 guide sleeve travel mm : 2.01 Tolerance mm : + 0.20 Rated speed rpm : 775 guide sleeve travel mm : 6.42 Tolerance mm : + 0.25 Tolerance mm : 4.00 Rated speed rpm : 1155 Tolerance 1/min : + 15
Rated speed rpm : 300 guide sleeve travel mm : 2.01 Tolerance mm : 4.00 Rated speed rpm : 775 guide sleeve travel mm : 6.42 Tolerance mm : 4.00 Tolerance mm : 4.00 Rated speed rpm : 1085 Tolerance 1/min : 4.00 Tolerance mm : 4.00 Rated speed rpm : 1155

Tolerance mm Rated speed rpm	: + 0.50 : 1270	Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 550 : - : 8.50 : +- 0.10
LOW IDLE		MEASUREMENT	
control lever		Rated speed rpm	: 550
position degree tolerance degree	: 77.0 : + 4.0	Pressure hPa rack travel mm Tolerance mm	: 640 : 2.00 : +- 0.10
control lever position degree colerance degree	: +- 4.0	Pressure hPa rack travel mm Tolerance mm	: 240 : 0.25 : +- 0.05
Setting point w/o	_	‡	
Rated speed rpm CRT mm min.	: 200 : > 8.00	FUSL DELIVERY CHA	RACTERISTICS
Testing: Rated speed rpm	: 300	Aneroid pressure hPa Rated speed rpm	: 1500 : 1050
rack travel mm Tolerance mm	: 4.20 : + 0.10	Del. quantity cm3/1000 strokes Tolerance	
Rated speed rpm	: 375	cm3/1000 strokes Check tolerance cm3/1000s.	: + 6.0
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 10.00	Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
Rated speed rpm rack travel mm Tolerance mm		Aneroid pressure	
Rated speed rpm rack travel mm	: 550 : 10.90 : +- 0.10	+ hPa + Rated speed rpm + Del. quantity + cm3/1000 strokes	
Tolerance mm Rated speed rpm	: 690	Tolerance - cm3/1000 strokes	
rack travel mm Tolerance mm		Check tolerance cm3/1000s.	: +- 6.0
ANEROID/ALTITUDE COMPENSATOR TEST		Aneroid pressure hPa Rated speed rpm	: - : 550
SETTING		Del. quantity cm3/1000 strokes	: 208.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 550 : 1500 : 10.90 : +- 0.10	Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: +- 1.0 : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : +- 15.0 Check tolerance cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm : 300

Rack travel in mm : 4.20
Tolerance mm : + 0.10
Del. quantity
cm3/1000 strokes : 23.0
Tolerance
cm3/1000 strokes : + 3.0
Check tolerance
cm3/1000s. : +- 6.0
Spreed
Tolerance
cm3/1000 strokes : 5.0
Check tolerance
cm3/1000 strokes : 5.0
Check tolerance
cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 02,09,97

Test oil : ISO 4113

Combination No. : 0 403 476 1120

Injection pump

Pump designation : PES6MW100/720kS1225

: -1

EP type number : 0 413 406 220

Governor

Governar dasign. : RSV400...1000MW1A338

: -1

Governer no.

: 0 420 085 184

Cust. part No. : 9880790

Customer-spec. information

Customer : LIEBHERR

Motor

: D 926 T-EA2

Power KW

: 132.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

Tolerance *C

: +- 2.0

Overflow valve : 1 417 413 049

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

: 173.5

Tolerance bar

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

2.0

x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0

Tolerance bar : +- 1.0

: 3.05 : +- 0.05 Prestroke mm Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm: 12.30

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 132.5

Tolerance

cm3/1000 strokes : \leftarrow 1.0

H27

Check tolerance cm3/1000s.	: +- 4.0	+ Che + cm3 + Spi
Spreed		+ Tol
		+ cm3
Tolerance cm3/1000 strokes	: 4.0	+ Che
CMD/ (UUU Strokes	. 4.0	† cm3
Check tolerance		I
cm3/1000s.	: 7.5	 -
		+ cor
		+
Rated speed rpm	. 400	+ cor
kated speed rpm	. 400	+ pos
kack travel in mm	1: 5.80	I
Tolerance mm	: ← 0.10	+ RA
Del. quantity		+ rad
cm3/1000 strokes	: 17.0	Rat
Tolerance	2.0	† To
	: ← 2.C	†
check tolerance cm3/1000s.	: +- 4.5	+ rad
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cm3/1000 strokes	: 3.5	rai
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WITH GOVERNOR GUIDE SLEEVE POSI control lever position degree Rated speed rpm	TION : - 3 : 800	Ra- To LOI cor pos
WITH GOVERNOR GUIDE SLEEVE POSI control lever position degree Rated speed rpm Rack travel in mm	TION : - 3 : 800 :: 0.65	Ra- To Cor to
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WITH GOVERNOR GUIDE SLEEVE POSI control lever position degree Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa	TION : - 3 : 800 :: 0.65 : + 0.35 : 1.25	Ratification Ratif
WITH GOVERNOR GUIDE SLEEVE POSI control lever position degree Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity	TION : - 3 : 800 : 0.65 : + 0.35 : 1.25 Y AT FULL LOAD STOP : 900 : 950	Ratification in the control of the c
WITH GOVERNOR GUIDE SLEEVE POSI control lever position degree Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes	TION : - 3 : 800 : 0.65 : + 0.35 : 1.25 Y AT FULL LOAD STOP : 900 : 950	Ratification of the control of the c
WITH GOVERNOR GUIDE SLEEVE POSI control lever position degree Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity	TION : - 3 : 800 : 0.65 : + 0.35 : 1.25 Y AT FULL LOAD STOP : 900 : 950 : 132.5	Rate To To To To To To To To To To To To To

Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5
CONTROL LEVER
<pre>control lever position degree : 93.0 tolerance degree : +- 4.0</pre>
RATED SPEED rack travel mm : 11.30 Rated speed rpm : 925 Tolerance 1/min : + 8
rack travel mm : 4.00 Rated speed rpm : 960 Tolerance 1/min : +- 10
rack travel mm : 1.00 Folerance mm : +- 0.70 Rated speed rpm : 1100
rack travel mm : 4.00 Rated speed rpm : 970 Tolerance 1/min : +- 10
LOW IDLE
control lever position degree : 70.0 tolerance degree : + 4.0
Setting point w/out bumper spring
Rated speed rpm : 400 rack travel mm : 5.00 Tolerance mm : +- 0.10
Rated speed rpm : 100
CRT mm min. : > 19.50
Testing:
Rated speed rpm : 400 rack travel mm : 5.80 Tolerance mm : +- 0.10

		+ Tolerance	
		+ cm3/1000 strokes	· 6.0
TORQUE CONTROL		+ Check tolerance	. 0.0
Rated speed rpm	: 900	- cm3/1000s.	; 9.0
rack travel mm		1	. ,.0
Tolerance mm	: ← 0.05	<u></u>	
		+ Aneroid pressure	
Rated speed rpm	: 500	+ hPa	: 950
rack travel mm		Rated speed rpm	
Tolerance mm	: + 0.10	Del. quantity	. , , , ,
TOTAL GITTE TIME		+ cm3/1000 strokes	: 132.0
Rated speed rpm	. 700	+ Tolerance	
rack travel mm		+ cm3/1000 strokes	: +- 2.0
Tolerance mm		+ Check tolerance	2.0
		+ cm3/1000s.	: +- 5.0
		1	
ANEROID/ALTITUDE			
COMPENSATOR TEST		+ Aneroid pressure	
		+ hPa	•
		+ Rated speed rpm	500
SETTING		+ Del. quantity	
		+ cm3/1000 strokes	: 120.0
Rated speed rpm	: 500	+ Tolerance	
Pressure hPa	-	cm3/1000 strokes	: + 1.0
rack travel mm	: 12.20	+ Check tolerance	
Tolerance mm	: + 0.05	+ cm3/1000s.	: +- 4.0
		+	7.0
Rated speed rpm	: 500	<u> </u>	
Pressure hPa	: 950		
rack travel mm	: 12.30	STARTING FUEL DEL	IVFRY
Tolerance mm	: +- 0.10	+	
		Rated speed rpm	: 100
MEASUREMENT		- rack travel mm	: 20.25
		+ Tolerance mm	: +- 0.75
Rated speed rpm	: 500	+ Del. quantity	
		+ cm3/1000 strokes	: 135.0
Pressure hPa	: 400	Tolerance	
rack travel mm	: 12.20	+ cm3/1000 strokes	: +~ 5.0
Tolerance mm	: ÷ 0.10	+ Check tolerance	
		+ cm3/1000s.	: +- 8.0
Pressure hPa	: 450	+	
rack travel mm	: 12.25	+	
Tolerance mm	: ← 0. 05	+	
		+	
		+ LOW IDLE	
		+	
FUEL DELIVERY CHA	ARACTERISTICS	+ Rated speed rpm	: 400
		†	
		+ Rack travel in mm	
Aneroid pressure		+ Tolerance mm	: +- 0.10
hPa	: 950	+ Del. quantity	4
Rated speed rpm	: 500	+ cm3/1000 strokes	: 17.0
Del. quantity	407.0	+ Tolerance	
cm3/1000 strokes	: 123.0	+ cm3/1000 strokes	
Tolerance		+ Check tolerance	
cm3/1000 strokes	: ← 2.0	+ cm3/1000s.	: +- 4.5
Check tolerance		+ Spreed	
cm3/1000s.	: ← 5.0	+ Tolerance	
Spreed		+ cm3/1000 strokes	: 3.5
		+	

Check tolerance cm3/1000s.	:	5.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 15.08.97 Test oil : ISO 4113

Combination No. : F 000 409 888

Injection pump

Pump designation : PES6A95D410RS2812 EP type number : 9 400 084 028

Governor

Governer design. : RQV350...1300 Governer no. : 9 420 083 177

Cust. part No. :

Customer-spec. information Customer : MWM

: 6.10 TCA EURO II Motor

Power KW : 154.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.80 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +-- 0.75

Beginning of delivery differende

and maximum rack

travel : 10.50 Tolerance mm : + 1.50 Difference ° CS : 2.00

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 13.40

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 118.0

Tolerance cm3/1000 strokes : + 1.0	+ guide sleeve + travel mm : 8.55 + Tolerance mm : + 0.25
Check tolerance cm3/1000s. : +- 3.0	<u> </u>
Spreed	+ GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes : 3.5	control lever position degree : - 3 Rated speed rpm : 1485
Check tolerance cm3/1000s. : 8.0	Rack travel in mm : 16.50 Tolerance mm : +- 1.30
Rated speed rpm : 350	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 6.10 Tolerance mm: +- 0.10 Del. quantity cm3/10C0 strokes: 16.C Tolerance cm3/1000 strokes: +- 2.0 Check tolerance cm3/1000s. : +- 4.5 Spreed Tolerance cm3/1000 strokes: 5.5 Check tolerance cm3/1000s. : 9.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1300 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 118.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 8.0
GUIDE SLEEVE TRAVEL	control lever
Rated speed rpm : 800 guide sleeve	position degree : 118.0 tolerance degree : +- 4.0
travel mm : 3.95 Tolerance mm : + 0.25 Rated speed rpm : 1350	+ RATED SPEED + rack travel mm : 12.40 + Rated speed rpm : 1390 + Tolerance 1/min : + 5
guide sleeve travel mm : 7.20 Tolerance mm : +- 0.10	rack travel mm : 4.00 Rated speed rpm : 1560 Tolerance 1/min : +- 15
Rated speed rpm : 300 guide sleeve travel mm : 1.05 Tolerance mm : + 0.25	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1730
Rated speed rpm : 550 guide sleeve travel mm : 2.75 Tolerance mm : +- 0.25	LOW IDLE
Rated speed rpm : 1500	‡

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control lever position degree tolerance degree		Pressure hPa rack travel mm Tolerance mm	: 2.25
Setting point w/o	ut bumper spring	Start interlock	
Rated speed rpm	: 100	Rated speed rpm Rated speed rpm	
CRT mm min.	: > 8.50	Check	, , , , , , , , , , , , , , , , , , , ,
Testing:		speed 1/min Check	: > 80
Rated speed rpm rack travel mm	: 6.10	speed 1/min	: < 200
Tolerance mm	: +- 0.10	FUEL DELIVERY CH	ARACTERISTICS
Rated speed rpm	: 475	‡ <u></u>	
TORQUE CONTROL	4700	Aneroid pressure	: 1200
Rated speed rpm rack travel mm Tolerance mm	: 13.40	Rated speed rpm Del. quantity cm3/1000 strokes	
Rated speed rpm	: 800	Tolerance cm3/1000 strokes	: + 2.0
rack travel mm Tolerance mm		Check tolerance cm3/1000s. Spreed	: +- 4.0
ANEROID/ALTITUDE		Tolerance + cm3/1000 strokes	: 5.0
COMPENSATOR TEST		+ Check tolerance + cm3/1000s.	: 8.0
SETTING		Aneroid pressure	
Rated speed rpm Pressure hPa	: 500 : 1200	→ hPa	: - : 500
rack travel mm Tolerance mm	: 13.40 : +- 0.05	Rated speed rpm Del. quantity cm3/1000 strokes	
Rated speed rpm	: 500	Tolerance cm3/1000 strokes	: +- 1.0
Pressure hPa	: -	Check tolerance cm3/1000s.	: + 3.0
MEASUREMENT Rated speed rpm	: 500	+ Spreed + Tolerance + cm3/1000 strokes	: 3.5
	: 210	Check tolerance cm3/1000s.	: 8.0
Pressure hPa rack travel mm Tolerance mm	: 1.30 : +- 0.10	- cm3/1000s.	: 0.0
Pressure hPa	: 130	+ STARTING FUEL DE	LIVERY
rack travel mm Tolerance mm	: 0.40 : +~ 0.05	Rated speed rpm	
Pressure hPa rack travel mm	: 760 : 3.40	rack travel mm Tolerance mm Del. quantity	
Tolerance mm	: + 0.10	cm3/1000 strokes	: 152.0
		•	

Tolerance cm3/1000 strokes : +- 8.0 Check tolerance cm3/1000s. : +- 11.0

LOW IDLE

Rated speed rpm : 350 Rack travel in mm : 6.10 : ← C.10 Tolerance mm Del. quantity cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : +- 4.5 Spreed Tolerance cm3/1000 strokes : 5.5 Check tolerance cm3/1000s. : 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 01.07.97 Test oil : ISO 4113

Combination No. : 0 400 866 230

Injection pump

Pump designation : PES6A95D410/3RS2907

EP type number : 0 410 896 884

Governor

Governer design. : RSV325...1250A5C874L

Governer no. : 0 420 232 629

Cust. part No. : 0423 2054 KY

Customer-spec. information

Customer : KHD-DMI Motor : BF6L 913

Power KW : 118.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

: 173.5

Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 3.00 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4,

Phasing

: 0-60-120-180-240

: -300

Tolerance

: +- 0.50

Check

tolerance °NW

: +- 0.75

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 13.20

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 93.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s.

: +- 3.0

Spreed	Tolerance : 3.5
Tolerance - cm3/1000 strokes : 3.5	Check tolerance : 8.0
	1
Check tolerance - cm3/1000s. : 8.0 -	CONTROL LEVED
	├ CONTROL LEVER ├
705	control lever
Reted speed rpm : 325	position degree : 104.0 tolerance degree : +- 4.0
Rack travel in mm: 8.20	+
Tolerance mm : + 0.10	RATED SPEED
Del. quantity	rack travel mm : 12.20
cm3/1000 strokes : 11.5	Rated speed rpm : 1295 Tolerance 1/min : +- 5
cm3/1000 strokes : +- 2.0	Toterance min . +- 5
Check tolerance	rack travel mm : 4.00
$cm3/1000s.$: \div 4.5	Rated speed rpm : 1355
Spreed	Tolerance 1/min : +- 15
Tolerance - cm3/1000 strokes : 5.5 -	nack traval me . 0.35
Check tolerance	Tolerance mm · +- 0.55
cm3/1000s. : 9.0	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1550
•	ļ.
4->	rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1400 Tolerance 1/min : +- 15
WITH GOVERNOR	Toterance i/min : +- 15
•	+
GUIDE SLEEVE POSITION	
GUIDE SLEEVE POSITION -	LOW IDLE
GUIDE SLEEVE POSITION control lever	LOW IDLE
control lever - position degree : FREE -	control lever
control lever	control lever position degree : 70.0
control lever - position degree : FREE - Rated speed rpm : 8CO -	control lever
control lever - position degree : FREE -	control lever position degree : 70.0
control lever position degree : FREE Rated speed rpm : 8CO Rack travel in mm : 0.50 Tolerance mm : + 0.20	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring
control lever position degree : FREE Rated speed rpm : 8CO Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm : 8CO Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70
control lever position degree : FREE Rated speed rpm : 8CO Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : +- 0.10
control lever position degree : FREE Rated speed rpm : 8CO Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70
control lever position degree : FREE Rated speed rpm : 8CO Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : +- 0.10 Testing: Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm : 8CO Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : +- 0.10 Testing: Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm : 8CO Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : +- 0.10 Testing:
control lever position degree : FREE Rated speed rpm : 8CO Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : -	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : +- 0.10 Testing: Rated speed rpm : 325 rack travel mm : 8.20 Tolerance mm : +- 0.10
control lever position degree : FREE Rated speed rpm : 8CO Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : +- 0.10 Testing: Rated speed rpm : 325 rack travel mm : 8.20 Tolerance mm : +- 0.10 rack travel mm : 2.00
control lever position degree : FREE Rated speed rpm : 8CO Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 93.0	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : +- 0.10 Testing: Rated speed rpm : 325 rack travel mm : 8.20 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 560
control lever position degree : FREE Rated speed rpm : 8CO Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 93.0 Tolerance	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : +- 0.10 Testing: Rated speed rpm : 325 rack travel mm : 8.20 Tolerance mm : +- 0.10 rack travel mm : 2.00
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 93.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : +- 0.10 Testing: Rated speed rpm : 325 rack travel mm : 8.20 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 560 Tolerance 1/min : +- 30
control lever position degree : FREE Rated speed rpm : 8CO Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 93.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : +- 0.10 Testing: Rated speed rpm : 325 rack travel mm : 8.20 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 560 Tolerance 1/min : +- 30
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 93.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 7.70 Tolerance mm : +- 0.10 Testing: Rated speed rpm : 325 rack travel mm : 8.20 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 560 Tolerance 1/min : +- 30

Tolerance mm : +- 0.05 Rated speed rpm : 500 rack travel mm : 13.25 Tolerance mm : \leftarrow 0.10 FUEL DELIVERY CHARACTERISTICS Aneroid pressure Rated speed rpm : 500 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.0 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.50 : +- 1.00 Tolerance mm Del. quantity cm3/1000 strokes : 124.0 Tolerance cm3/1000 strokes : \leftarrow 7.5 Check tolerance : +- 10.0 cm3/100Cs. LOW IDLE Rated speed rpm : 325 Rack travel in mm : 8.20 Tolerance mm : \leftarrow 0.10 Del. quantity cm3/1000 strokes : 11.5 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.5 Spreed Tolerance cm3/10UU strong Check tolerance - 10000s : 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 10.09.97 : ISO 4113

Combination No. : 0 402 066 707

Injection pump

Pump designation : PES6P120A120RS3358 EP type number : 0 412 026 784

Governor

Governer design. : RSV475...1100P2A618

Governer no. : 0 421 833 513

Cust. part No. : 3927356

Customer-spec. information Customer : CDC

Motor

: 68TA ELITE

: 136.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0

Tolerance bar $: \leftarrow 0.1$

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

208.5 har

Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 2.85 Tolerance mm : +- 0.05

Check

tolerance mm : 4- 0.10

Rack travel in mm : 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 : -300 Phasing

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 6.75

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 11.35

Tolerance mm : +- 0.05

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Del. quantity	Aneroid pressure hPa : 1200
cm3/1000 strokes : 146.5	Del. quantity cm3/1000 strokes : 146.5
Tolerance cm3/1000 strokes : +- 1.0	Tolerance cm3/1000 strokes : +- 1.0
Check tolerance cm3/1000s. : + 3.0	Check tolerance cm3/1000s. : +- 3.0 Spreed
Spreed	Tolerance cm3/1000 strokes : 4.0
Foterance cm3/1000 strokes : 4.0	Check tolerance cm3/1000s. : 7.5
Check tolerance cm3/1000s. : 7.5	CONTROL LEVER
Rated speed rpm : 475	<pre>control lever position degree : 103.0 tolerance degree : +- 4.0</pre>
Rack travel in mm : 5.40 Tolerance mm : + 0.10 Del. quantity	RATED SPEED rack travel mm : 10.30 Rated speed rpm : 1175
cm3/1000 strokes : 24.5 Tolerance	Tolerance 1/min : +- 5
cm3/1000 strokes : +- 2.0 Check tolerance	rack travel mm : 6.50 Rated speed rpm : 1230
cm3/1000s. : +- 4.5 Spreed	Tolerance 1/min : +- 5
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1375
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	<pre>control lever position degree : 81.0 tolerance degree : +- 4.0</pre>
control lever position degree : - 3 Rated speed rpm : 800	Control lever difference Grad : 19.0 tolerance degree : +- 6.0
Rack travel in mm : 0.50 Tolerance mm : +- 0.20	Setting point w/out bumper spring
governor spring pre-tension click setting x : 3.75	Rated speed rpm : 475 rack travel mm : 4.90 Tolerance mm : + 0.05
	Rated speed rpm : 100
FULL LOAD DELIVERY AT FULL LOAD STOP	CRT mm min. : > 19.00
Rated speed rpm : 1100	Testing:

Rated speed rpm	: 475
rack travel mm	
Tolerance mm	: 5.40 : ← 0.10
TO COT GITTE THE	3.10
rack travel mm	: 2.00
Rated speed rpm	
Tolerance 1/min	: 30
TODOUG CONTROL	
TORQUE CONTROL	1100
Rated speed rpm rack travel mm	: 1100 : 11.35
Tolerance mm	: +- 0.05
ANEROID/ALTITUDE	
COMPENSATOR TEST	
SETTING	
	500
Rated speed rpm	
Pressure hPa	: 1200
Rated speed rpm	: 500
Pressure hPa	: -
rack travel mm	9.10
	: +- 0.20
Tolerance mm	; 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa	: 800
rack travel mm	: 10.70 : +- 0.20
Tolerance mm	: - 0.20
Pressure hPa	: 545
rack travel mm	: 9.75 : ± 0.20
Tolerance mm	: - 0.20
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	
hPa	
Rated speed rpm	: 500
Del. quantity	
cm3/1000 strokes	: 96.5
Tolerance	4 5
	: ← 1.0
Tolerance	: +- 1.0
Tolerance cm3/1000 strokes	: +- 1.0 : +- 3.0

Rated speed rpm rack travel mm Tolerance mm	-	+-	100 20.50 0.50
Del. quantity cm3/1000 strokes Tolerance	:		165.0
cm3/1000 strokes Check tolerance	:	+-	20.0
cm3/1000s.	:	+-	25.0

LOW IDLE

Rated speed rpm	:		475
Rack travel in mm Tolerance mm Del. quantity	:	+	5.40 0.10
cm3/1000 strokes	:		24.5
cm3/1000 strokes Check tolerance	:	+-	2.0
cm3/1000s. Spreed	•	+-	4.5
Tolerance cm3/1000 strokes Check tolerance	:		6.0
cm3/1000S.	:		9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 27.02.97 Test oil : 150 4113

Combination No. : 9 400 030 695

Injection pump

Pump designation : PES4A95D320/3RS2880

EP type number : 9 410 037 214

Governor

Governer design. : RSV475...1250A0C825R

Governer no. : 9 420 034 701

Cust. part No. : 3928665

Customer—spec. information Customer : CDC : 4BT3.9 : 82.0 Motor Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet temp. °C : 40 Tolerance : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 2.45 Tolerance mm : +- 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1- 3- 4- 2

Phasing : 0-90-180-270

Start of delivery blocking

*NW after s.o.d. : 8.00 Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 12.55

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 106.0

	+ Check tolerance
Tolerance cm3/1000 strokes : +- 1.0	+ cm3/1000s. : +- 3.0 + Spreed + Tolerance
Check tolerance cm3/1000s. : +- 3.0	cm3/1000 strokes : 4.0 Check tolerance
Spreed	+ cm3/1000s. : 6.5
Tolerance cm3/1000 strokes : 4.0	CONTROL LEVER
Check tolerance cm3/1000s. : 6.5	control lever position degree : 114.0 tolerance degree : +- 4.0
Rated speed rpm : 475 Rack travel in mm : 5.80	RATED SPEED rack travel mm : 11.50 Rated speed rpm : 1335 Tolerance 1/min : +- 5
Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 20.5 Tolerance cm3/1000 strokes : + 2.0	rack travel mm : 6.80 Rated speed rpm : 1395 Tolerance 1/min : +- 5
Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance	rack travel mm : 0.85 Tolerance mni : +- 0.55 Rated speed rpm : 1450
cm3/1000 strokes : 6.0 Check tolerance cm3/1000S. : 8.0	rack travel mm : 6.80 Rated speed rpm : 1395 Tolerance 1/min : +- 15
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	<pre></pre>
control lever position degree : - 3 Rated speed rpm : 800	Control lever difference Grad: 27.0 tolerance degree: +- 4.0
Rack travel in mm : 0.50 Tolerance mm : +- 0.20	Setting point w/out bumper spring
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 475 rack travel mm : 5.30 Tolerance mm : +- 0.10
Rated speed rpm : 1250 Aneroid pressure hPa : 1000	Rated speed rpm : 100
Del. quantity cm3/1000 strokes : 106.0 Tolerance	CRT mm min. : > 19.00 Testing:
cm3/1000 strokes : + 1.0	Rated speed rpm : 475

TORQUE CONTROL Rated speed rpm : 1250 rack travel mm : 12.55 Tolerance mm : + 0.05 Rated speed rpm : 750 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1000 Rated speed rpm : 500 Pressure hPa : rack travel mm : 11.50
Tolerance mm : + 0.10 MEASUREMENT Rated speed rpm : 500 Pressure hPa : 600 rack travel mm : 12.30 Tolerance mm : +- 0.20 Pressure hPa : 460 rack travel mm : 11.75 Tolerance mm : + 0.20 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 80.5 Tolerance cm3/1000 strokes : +- 1.0Check tolerance cm3/1000s. : +- 3.0

Del. quantity cm3/1000 strokes : 120.0 Tolerance cm3/1000 strokes : +- 10.0 Check tolerance cm3/1000s. : +- 15.0

LOW IDLE

Rated speed rpm : 475

Rack travel in mm : 5.80
Tolerance mm : +- 0.10
Del. quantity
cm3/1000 strokes : 20.5
Tolerance
cm3/1000 strokes : +- 2.0
Check tolerance
cm3/1000s. : +- 4.5
Spreed
Tolerance
cm3/1000 strokes : 6.0
Check tolerance
cm3/1000 strokes : 6.0
Check tolerance
cm3/1000s. : 8.0

End of test specification sheet

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 13.05.97 : ISO 4113

Combination No. : 9 400 030 731

Injection pump

Pump designation : FES6A95D32G/3RS2881 EP type number : 9 410 037 215

Governor

Governer design. : RSV475...1100A00843R

Governer no. : 9 420 034 709

Cust. part No. : 3929406

Customer-spec. information Customer : CDC : 6BT Motor Power KW : 100.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0
Tolerance bar : +- 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.85 Tolerance mm : +- 0.05

Check

tolerance mm : ÷- 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Start of delivery blocking

*NW after s.o.d. : 7.00 Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 11.25 Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 94.0

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Tolerance cm3/1000 strokes : +- 1.0	Del. quantity cm3/1000 strokes : 94.0 Tolerance
Check tolerance	cm3/1000 strokes : +- 1.0 Check tolerance
cm3/1000s. : +- 3.0	- cm3/1000s. : +- 3.0 - Spreed
Spreed	+ Tolerance + cm3/1000 strokes : 3.5
Tolerance cm3/1000 strokes : 3.5	Check tolerance cm3/1000s. : 6.0
Check tolerance cm3/1000s. : 6.0	CONTROL LEVER
	+
Rated speed rpm : 500	control lever position degree : 107.0 tolerance degree : +- 4.0
Rack travel in mm : 5.10 Tolerance mm : + 0.10	+ RATED SPEED
Del. quantity	rack travel mm : 10.23
cm3/1000 strokes : 18.5	Rated speed rpm : 1165
Tolerance cm3/1000 strokes : +- 2.0	+ Tolerance 1/min : +- 5
Check tolerance	rack travel mm : 5.40
cm3/1000s. : +- 4.5	Rated speed rpm : 1230
Spreed Tolerance	+ Tolerance 1/min : + 5
cm3/1000 strokes : 3.5	rack travel mm : 0.85
Check tolerance	+ Tolerance mm : +- 0.55
cm3/1000s. : 5.5	Rated speed rpm : 1300
	rack travel mm : 5.40
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	+ Rated speed rpm : 1230 + Tolerance 1/min : +- 15
	‡
GUIDE SLEEVE POSITION	LOW IDLE
control lever	‡
position degree : - 3	control lever
Rated speed rpm : 800	<pre>position degree : 86.0 tolerance degree : + 4.0</pre>
Rack travel in mm : 0.50	+
Tolerance mm : +- 0.20	Control lever difference
governor spring	+ Grad : 21.0 + tolerance degree : + 6.0
pre-tension	+
click setting x : 4.00	+ Setting point w/out bumper spring
	Rated speed rpm : 500
FULL LOAD DELIVERY AT FULL LOAD STOP	+ rack travel mm : 4.60 + Tolerance mm : + 0.10
Rated speed rpm : 1100	+
Aneroid pressure hPa : 900	Rated speed rpm : 100
nra ; 700	T CRT mm min. : > 19.00

Testing:

500 Rated speed rpm : rack travel mm : 5.10 : +- 0.10 Tolerance mm

TORQUE CONTROL

Rated speed rpm : 1100 11.25 rack travel mm Tolerance mm : ← 0.05

Rated speed rpm 800 rack travel mm : 12.05 : +- 0.10 Tolerance mm

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

800 Rated speed rpm Pressure hPa 900

800 Rated speed rpm Pressure hPa 11.30 rack travel mm : +- 0.20 Tolerance mm

MEASUREMENT

Rated speed rpm 800

Pressure hPa : 650 11.75 rack travel mm : ← 0.05 Tolerance mm

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

900 hPa Rated speed rpm 800

Del. quantity

cm3/1000 strokes : 107.5

Tolerance

cm3/1000 strokes : \leftarrow 2.0 Check tolerance

cm3/1000s. : +- 4.0

Aneroid pressure

hPa Rated speed rpm : 800 Del. quantity

cm3/1000 strokes : 97.5

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. 3.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : +- 0.50 Del. quantity

cm3/1000 strokes : 120.5 Tolerance

cm3/1000 strokes : +- 10.0

Check tolerance

cm3/1000s. : +- 15.0

LOW IDLE

Rated speed rpm : 500

5.10 Rack travel in mm : Tolerance mm : \leftarrow 0.10 Del. quantity cm3/1000 strokes : 18.5 Tolerance cm3/1000 strokes : +-2.0

Check tolerance cm3/1000s. : +-4.5 Spreed

Tolerance

cm3/1000 strokes : 3.5

Check tolerance cm3/1000s.

5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 06.12.96 : ISO 4113

Combination No. : 9 400 030 734

Injection pump

Pump designation : PES4A95D320/3RS2880

EP type number : 9 410 037 214

Governor

Governer design. : RSV475...1100A0C847R

Governer no. : 9 420 034 713

Cust. part No. : 3930153

Customer-spec. information Customer : CDC Motor : 4BT3.9 Power KW : 74.5

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

CEMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.45 Tolerance mm : + 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Start of delivery blocking

*NW after s.o.d. : 7.50 Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 12.75 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 109.5

Tolerance cm3/1000 strokes : + 1.0	+ Tolerance + cm3/1000 strokes : +- 1.0
Check tolerance cm3/1000s. : + 3.0	- Check tolerance - cm3/1000s. : +- 3.0 - Spreed
Spreed	+ Tolerance + cm3/1000 strokes : 4.0 - Check tolerance
Tolerance cm3/1000 strokes : 4.0	cm3/1000s. : 6.5
Check tolerance cm3/1000s. : 6.5	CONTROL LEVER
	control lever position degree : 101.0
Rated speed rpm : 500	tolerance degree : +- 4.0
Rack travel in mm: 5.65 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 20.5	RATED SPEED rack travel mm : 11.70 Rated speed rpm : 1165 Tolerance 1/min : +- 5
Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed	rack travel mm : 6.00 Rated speed rpm : 1230 Tolerance 1/min : +- 5
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 8.0	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1375
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	control lever position degree : 81.0 tolerance degree : +- 4.0
control lever position degree : - 3	Control lever difference Grad: 20.0
Rated speed rpm : 800	+ Grad : 20.0 + tolerance degree : +- 4.0
Rack travel in mm: 0.50 Tolerance mm: + 0.20	Setting point w/out bumper spring
governor spring	Rated speed rpm : 500 rack travel mm : 5.15
pre-tension click setting x : 3 25	+ Tolerance mm : +- 0.10
	Rated speed rpm : 100
FULL LOAD DELIVERY AT FULL LOAD STOP	+ CRT mm min. : > 19.00
Rated speed rpm : 1100 Aneroid pressure hPa : 1000	Testing:
hPa : 1000 Del. quantity cm3/1000 strokes : 109.5	Rated speed rpm : 500 rack travel mm : 5.65 Tolerance mm : +- 0.10
CHID/ 1000 SCI ORCS . 107.7	, rocer diffee min O. to

TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1100 : 12.75 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 750 : 13.70 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 750 : 1000
Rated speed rpm	: 750
Pressure hPa rack travel mm	: - : 12.75
Tolerance mm	: + 0.10
MEASUREMENT	
Rated speed rpm	: 750
Pressure hPa rack travel mm Tolerance mm	: 650 : 13.50 : + 0.20
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	
hPa	: 1000
Rated speed rpm Del. quantity	: 750
cm3/1000 strokes	: 123.5
Tolerance cm3/1000 strokes	: +- 2.0
Check tolerance	. +- 2.0
cm3/1000s.	: +- 4.0
Aneroid pressure	
hPa	: -
Rated speed rpm Del. quantity	: 750
cm3/1000 strokes	: 110.0
Tolerance cm3/1000 strokes	: +- 1.0
Check tolerance	
cm3/1000s	· +- 3 A

STARTING FUEL DELI	Įν	ERY			
Rated speed rpm rack travel mm Tolerance mm Del. quantity	:	+	100 20.50 0.50		
cm3/1000 strokes	:		122.0		
cm3/1000 strokes Check tolerance	:	+-	10.0		
cm3/1000s.	:	+-	15.0		
LOW IDLE				 	
Rated speed rpm	:		500		
Rack travel in mm Tolerance mm Del. quantity	:	+-	5.65 0.10		
cm3/1000 strokes	:		20.5		
Tolerance cm3/1000 strokes Check tolerance	:	+-	2.0		
			, -		

End of test specification sheet

cm3/1000s. : +- 4.5

cm3/1000 scrokes : 6.0

cm3/1000s. : 8.0

Check tolerance

Spreed Tolerance

cm3/1000s. : +- 3.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 06.05.97 : ISO 4113

Combination No. : 9 400 030 747

Injection pump

Pump designation : PES4A95D320/3RS2880

EP type number : 9 410 037 214

Governor

Governer design. : RSV475...1100A0C863R

Governor no. : 9 420 034 721

Cust. part No. : 3930152

Customer-spec. information Customer : CDC : 4BT3.9 Motor Power KW : 71.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

40

Tolerance *C

: +- 2.0

Overflow valve : 2 417 413 093

Inlet press, bar : 2.0 Tolerance bar : + 0.1 Inlet press. bar :

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

har

208.5

Tolerance bar

: +- 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure ban : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 2.45 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1- 3- 4- 2

Phasing : 0-90-180-270

Start of delivery blocking

*NW after s.o.d. : 7.50 Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 11.75 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 100.0

Tolerance cm3/1000 strokes : +- 1.0	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Check tolerance cm3/1000s. : +- 3.0	cm3/1000s. : +- 3.0 - Spreed
Spreed	+ Tolerance - cm3/1000 strokes : 4.0
Tolerance cm3/1000 strokes : 4.0	Check tolerance cm3/1000s. : 6.5
Check tolerance cm3/1000s. : 6.5	CONTROL LEVER
Rated speed rpm : 475	control lever position degree : 99.0 tolerance degree : +- 4.0
Rack travel in mm: 5.75 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 21.5	RATED SPEED rack travel mm : 10.75 Rated speed rpm : 1165 Tolerance 1/min : +- 5
Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000S. : + 4.5 Spreed	rack travel mm : 6.00 Rated speed rpm : 1225 Tolerance 1/min : +- 5
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000S. : 8.0	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1375
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 6.00 Rated speed rpm : 1225 Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION	LOW IDLE
control lever position degree : - 3 Rated speed rpm : 800	control lever position degree : 87.0 tolerance degree : +- 4.0
Rack travel in mm : 0.50 Tolerance mm : +- 0.20	Control lever difference Grad: 12.0 tolerance degree: +- 4.0
<pre>governor spring pre-tension click setting x : 4.25</pre>	Setting point w/out bumper spring
FULL LOAD DELIVERY AT FULL LOAD STOR	Rated speed rpm : 475
Rated speed rpm : 1100 Aneroid pressure	Rated speed rpm : 100
hPa : 1000 Del. quantity	CRT mm min. : > 19.00
cm3/1000 strokes : 100.0	Testing:

Rated speed rpm rack travel mm Tolerance mm	: 475 : 5.75 : + 0.10
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1100 : 11.75 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 750 : 12.75 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 750 : 1000
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 750 : - : 10.90 : + 0.10
MEASUREMENT	
Rated speed rpm	: 750
Pressure hPa rack travel mm Tolerance mm	: 600 : 12.70 : +- 0.20
Pressure hPa rack travel mm Tolerance mm	: 410 : 11.80 : ← 0.20
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1000 : 750
cm3/1000 strokes Tolerance	: 112.5
cm3/1000 strokes Check tolerance cm3/1000s.	: + 2.0 : + 4.0
Aneroid pressure hPa	: -

Rated speed rpm	:		750	
Del. quantity cm3/1000 strokes	:		86.5	
Tolerance cm3/1000 strokes	:	+-	1.0	
Check tolerance cm3/1000s.	:	+-	3.0	
STARTING FUEL DEL	IV	ERY		
Rated speed rpm	:		100	
rack travel mm	:		20.50	
Tolerance mm	:	+	0.50	
Del. quantity cm3/1000 strokes	:		120.5	
Tolerance	•		120.5	
cm3/1000 strokes	:	+-	10.0	
Check tolerance			45.0	
cm3/1000S.	:	+-	15.0	
LOW IDLE				
LOW IDLE	:		475	
Rated speed rpm Rack travel in mm Tolerance mm		+	475 5.75 0.10	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity	:	+	5.75 0.10	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	:	+	5.75	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	:	+	5.75 0.10	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	:	+	5.75 0.10 21.5 2.0	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	:	+	5.75 0.10 21.5	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	:	+	5.75 0.10 21.5 2.0	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	:	+	5.75 0.10 21.5 2.0	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	•	+	5.75 0.10 21.5 2.0 4.5	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	•	+	5.75 0.10 21.5 2.0 4.5	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 10.12.96 : ISO 4113

Combination No. : F 002 A0Z 015

Injection pump

Pump designation : PES4A950320/3RS2880

EP type number : 9 410 037 214

Governor

Governer design. : RSV475...1250A0c892R

Governer no. : F 002 A20 215

Cust. part No. : 3928602

Customer-spec. information

Customer : CDC
Motor : 4BTA ELITE
Power KW : 86.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure bar : 208.5

Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0

Tolerance bar : +- 1.0

Prestroke mm : 2.45
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : ← 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270 Tolerance : +- 0.50

Check

tolerance "NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 9.00

Tolerance : +- 0.10

Check

tolerance °NW : +- 0.29

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 13.35

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 113.0	Tolerance cm3/1000 strokes : +- 1.0
	+ Check tolerance
Tolerance	+ cm3/1000s. : $+- 3.0$
cm3/1000 strokes : + 1.0	+ Spreed
	† Tolerance
Check tolerance	+ cm3/1000 strokes : 3.5
cm3/1000S. : +- 3.0	† Check tolerance
	+ cm3/1000s. : 6.0
Spreed	‡
Tolerance	
cm3/1000 strokes : 3.5	+ CONTROL LEVER
	+
Check tolerance	+ control lever
cm3/1000s. : 6.0	† position degreε : 109.0
	+
	+ RATED SPEED
	+ rack travel mm : 12.30
Rated speed rpm : 475	+ Rated speed rpm : 1300
	Tolerance 1/mir: : + 5
Rack travel in mm: 6.00	+
Tolerance mm : + 0.10	rack travel mm : 5.10
Del. quantity	+ Rated speed rpm : 1385
cm3/1000 strokes : 21.0	+ Tolerance 1/min : +- 5
Tolerance	
cm3/1000 strokes : +- 2.0	rack travel mm : 0.85
Check tolerance	+ Tolerance mm : +- 0.55
cm3/1000s. : +- 4.5	+ Rated speed rpm : 1450
Spreed	T Naced Speed (pill) . 1450
Tolerance	rack travel mm : 5.10
cm3/1000 strokes : 3.5	Rated speed rpm : 1390
Check tolerance	+ Tolerance 1/min : +- 15
cm3/1000s. : 5.5	T Toterance Militi : +- (5
. 5.5	Ŧ
(B) SETTING OF INJECTION PUMP	†
WITH GOVERNOR	LOW IDLE
	-
	+ control lever
GUIDE SLEEVE POSITION	+ position degree : 85.0
	†
Rated speed rpm : 800	+ Control lever difference
	+ Grad : 24.0
Rack travel in mm : 0.50	tolerance degree : +- 4.0
Tolerance mm : + 0.20	†
	+ Setting point w/out bumper spring
governor spring	+
pre-tension	+ Rated speed rpm : 475
click setting x : 4.25	+ rack travel mm : 5.50
	+ Tolerance mm : +- 0.10
	+
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
Rated speed rpm : 1250	CRT mm min. : > 19.00
Aneroid pressure	17,00
hPa : 1000	Testing:
Del. quantity	Lesting.
cm3/1000 strokes : 113.0	I Pated speed rom . /75
CIRD/ TUDU STROKES 7 115.U	+ Rated speed rpm : 475

rack travel mm Tolerance mm	: 6.00 : ← 0.10
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 560 : ← 30
TORQUE CONTROL Rated speed rpm rack travei mm Tolerance mm	: 1250 : 13.35 : + 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 800 : 1000
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 800 : - : 11.30 : + 0.20
MEASUREMENT	
Rated speed rpm	: 800
Pressure hPa rack travel mm Tolerance mm	: 650 : 12.80 : +- 0.20
Pressure hPa rack travel mm Tolerance mm	: 500 : 12.00 : ← 0.20
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm	: - 800
Del. quantity cm3/1000 strokes Tolerance	: 86.0
cm3/1000 strokes Check tolerance cm3/1000s.	: ← 1.0 : ← 3.0

rack travel mm : 20.50
Tolerance mm : + 0.50
Del. quantity
cm3/1000 strokes : 121.5
Tolerance
cm3/1000 strokes : + 10.0
Check tolerance
cm3/1000s. : + 15.0

LOW IDLE

Rated speed rpm : 475

Rack travel in mm : 6.00
Tolerance mm : + 0.10
Del. quantity
cm3/1000 strokes : 21.0
Tolerance
cm3/1000 strokes : + 2.0
Check tolerance
cm3/1000s. : + 4.5
Spreed
Tolerance
cm3/1000 strokes : 3.5
Check tolerance
cm3/1000 strokes : 5.5

End of test specification sheet

Rated speed rpm : 100

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 17.07.97 : ISO 4113

Combination No. : F 002 A0Z 026

Injection pump

Pump designation : PES4A950320/3RS2880 EP type number : 9 410 037 214

Governor

Governer design. : RSV475...1250A0C904R

Governer no. : F 002 A20 220

Cust. part No. : 3930148

Customer-spec. information Customer : CDC Motor : 48T3.9 : 63.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

RFMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : ← 1.0

Prestroke mm : 2.45 Tolerance mm : +- 0.05 Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Start of delivery blocking

*NW after s.o.d. : 8.50 Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 10.35 Tolerance mm : \leftarrow 0.05

Del. quantity

.m3/1000 strokes : 85.0

Tolerance	+ Tolerance
cm3/1000 strokes : +- 1.0	+ cm3/1000 strokes : +- 1.0
	+ Check tolerance
Check tolerance	+ cm3/1000s. : + 3.0
cm3/1000s. : +- 3.0	- Spreed
cm3/10003. ; +- 3.0	T '
	+ Tolerance
Spreed	+ cm3/1000 strokes : 3.5
	+ Check tolerance
Tolerance	+ cm3/1000s. : 6.0
cm3/1000 strokes : 3.5	+
	+
Check tolerance	
cm3/1000s. : 6.0	CONTROL LEVER
	+ control lever
	position degree : 112.0
Rated speed rpm : 475	tolerance degree : +- 4.0
Rated speed rpm : 475	T toterance degree . +- 4.0
Deal Assess 1 3 cmm s F 50	T DATES OBEES
Rack travel in mm: 5.50	+ RATED SPEED
Tolerance mm : + 0.10	rack travel mm : 9.30
Del. quantity	+ Rated speed rpm : 1305
cm3/1000 strokes : 20.5	+ Tolerance 1/min : ← 10
Tolerance	+
cm3/1000 strokes : +- 2.0	+ rack travel mm : 6.30
Check tolerance	Rated speed rpm : 1355
cm3/1000s. : + 4.5	+ Tolerance 1/min : +- 5
Spreed	
Tolerance	rack travel mm : 0.85
cm3/1000 strokes : 3.5	Tolerance mm : + 0.55
Check tolerance	+ Rated speed rpm : 1475
cm3/1000s. : 5.5	†
	+ rack travel mm : 6.30
	+ Rated speed rpm : 1355
(B) SETTING OF INJECTION PUMP	+ Tolerance 1/min : + 15
WITH GOVERNOR	+
	+
	· ·
	+
GUIDE SLEEVE POSITION	+ LOW IDLE
	+
	+
control lever	↓ control lever
position degree : - 3	position degree : 90.0
Rated speed rpm : 800	tolerance degree : + 4.0
Mateu speed / piii . Ooo	
Rack travel in mm : 0.50	Control lever difference
	Grad : 22.0
Tolerance mm : ← 0.20	1
•	tolerance degree : +- 6.0
governor_spring	
pre-tension	+ Setting point w/out bumper spring
click setting x : 4.50	+
•	- Rated speed rpm : 475
	rack travel mm : 5.00
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Tolerance mm : + 0.10
Rated speed rpm : 1250	Rated speed rpm : 100
Aneroid pressure	
· · · · · · · · · · · · · · · · · · ·	T CRT mm min. : > 19.00
hPa : -	T CAT (IMI) (IIII)
Del. quantity	Ť Tarkina.
cm3/1000 strokes : 85.0	† Testing:

Rated speed rpm rack travel mm Tolerance mm	: 475 : 5.50 : +- 0.10
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1250 : 10.35 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 750 : 11.00 : ← 0.10
Rated speed rpm rack travel mm Tolerance mm	: 950 : 10.70 : + 0.10
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm	: - : 750
Del. quantity cm3/1000 strokes	
Tolerance	
cm3/1000 strokes Check tolerance	: +- 2.0
cm3/1000s.	: +- 4.0
STARTING FUEL DEL	IVERY
Rated speed rpm	: 100
rack travel mm Tolerance mm	: 20.50 : ← 0.50
Del. quantity	
cm3/1000 strokes Tolerance	: 121.0
cm3/1000 strokes	: + 10.0
Check tolerance cm3/1000s.	: +- 15.0
CM3/ 10000.	
LOW IDLE	
Rated speed rpm	: 475
Rack travel in mm Tolerance mm Del. quantity	: 5.50 : +- 0.10
cm3/1000 strokes	: 20.5

Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 29,05,97 Edition : ISO 4113 Test oil

Combination No. : F 002 A0Z 039

Injection pump

Pump designation : PES6A95D320/3RS2881

EP type number : 9 410 037 215

Governor

Governer design. : RSV500...1100A0C919R

Governer no. : F 002 A20 229

Cust. part No. : 3932479

Customer-spec. information Customer : CDC : 6BT Motor Power KW : 101.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

40 temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar : +- 1.5 Tolerance bar

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.85 Tolerance mm : +- 0.05

Check

tolerance mm : **←** 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Start of delivery blocking

*NW after s.o.d. : 7.00 Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 11.25 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 94.0

Talanana		+ Del. quantity + cm3/1000 strokes	: 94.0
Tolerance cm3/1000 strokes	: + 1.0	Tolerance	74.0
CIID/ 1000 SCI OKES		cm3/1000 strokes	: +- 1.0
Check tolerance		+ Check tolerance	
cm3/1000s.	: +- 3.0	+ cm3/1000s.	: +- 3.0
		Spreed	
Spreed		+ Tolerance	
		+ cm3/1000 strokes	: 3.5
Tolerance		+ Check tolerance	
cm3/1000 strokes	: 3.5	+ cm3/1000s.	: 6.0
Charl Arlances		†	
Check tolerance cm3/1000s.	: 6.0	I	
CIID/ TODOS.	. 0.0	I CONTROL LEVER	
		T CONTINUE EEVEN	
		+ control lever	
Rated speed rpm	: 500	+ position degree	: 92.0
		+ tolerance degree	: +- 4.0
Rack travel in mm		+	
Tolerance mm	: +- 0.10	+ RATED SPEED	
Del. quantity		+ rack travel mm	: 10.20
cm3/1000 strokes	: 18.5	+ Rated speed rpm	
Tolerance		+ Tolerance 1/min	: +- 5
cm3/1000 strokes	: +- 2.0	†	
Check tolerance		+ rack travel mm	: 5.40
cm3/1000s.	: 4.5	+ Rated speed rpm	: 1230 : +- 5
Spreed		+ Tolerance 1/min	: +- 3
Tolerance cm3/1000 strokes	: 3.5	rack travel mm	: 0.85
Check tolerance	: 3.3	Tolerance mm	: ← 0.55
cm3/1000s.	: 5.5	Rated speed rpm	: 1350
CIII 27 10003.	. 5.5	T Mateu speed i piii	. 1330
		+ rack travel mm	: 5.40
(B) SETTING OF IN	JECTION PUMP	+ Rated speed rpm	: 1230
WITH GOVERNOR		+ Tolerance 1/min	: +- 15
		+	
		+	
CUINE OF EERE DOOL	TION	†	
GUIDE SLEEVE POSI	LTOM	+ LOW IDLE	
		1	
control lever		+	
position degree	: - 3	- control lever	
Rated speed rpm	: 800	+ position degree	: 75.0
, ,		+ tolerance degree	: +- 4.0
Rack travel in mm		+	
Tolerance mm	: +- 0.20	+ Control lever dif	
		+ Grad	: 17.0
governor spring		tolerance degree	: ← 6.0
pre-tension	4.75	† Carrier	
click setting x	: 1.75	+ Setting point w/o	ut bumper spring
		Rated speed rpm	: 500
FILL LOAD DELTHED	Y AT FULL LOAD STOP	+ rack travel mm	: 4.60
FULL LUMD DELIVER	I AT FULL LUAD STOP	Tolerance mm	· + 0.10
Rated speed rpm	: 1100	1 Section in the sect	
Aneroid pressure		Rated speed rpm	: 100
hPa	: 900	+	
· =		+ CRT mm min.	: > 19.00
		•	

Testing:

Rated speed rpm : 500 rack travel mm : 5.10 Tolerance mm : + 0.10

TORQUE CONTROL

Rated speed rpm : 1100 rack travel mm : 11.25 Tolerance mm : +- 0.05

Rated speed rpm : 800 rack travel mm : 12.15 Tolerance mm : + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 800 Pressure hPa : 900

Rated speed rpm : 800
Pressure hPa : rack travel mm : 11.30
Tolerance mm : +- 0.20

MEASUREMENT

Rated speed rpm : 800

Pressure hPa : 650 rack travel mm : 11.65 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 900 Rated speed rpm : 800

Del. quantity

cm3/1000 strokes : 107.5

Tolerance

cm3/1000 strokes : + 2.0

Check tolerance

cm3/1000s. : +- 4.0

Aneroid pressure

hPa : -Rated speed rpm : 800 Del. quantity

cm3/1000 strokes : 97.5

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s. : +- 3.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : +- 0.50

Del. quantity

cm3/1000 strokes : 120.5

Tolerance

cm3/1000 strokes : +- 10.0

Check tolerance

cm3/1000s. : +- 15.0

LOW IDLE

Rated speed rpm : 500

Rack travel in mm : 5.10 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 18.5

Tolerance

cm3/1000 strokes : \leftarrow 2.0

Check tolerance

cm3/1000S. : +- 4.5 Spreed

Tolerance

cm3/1000 strokes : 3.5

Check tolerance

cm3/1000s. : 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 23,04,97 Edition : ISO 4113 Test oil

Combination No. : F 002 A0Z 042

Injection pump

Pump designation : PES6A95D320/3RS2881

EP type number : 9 410 037 215

Governor

Governer design. : RSV500...1100A0C924R

Governer no. : F 002 A20 232

Cust. part No. : 3932477

Customer-spec. information Customer : CDC : 6BT Motor Power KW : 82.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. *C Tolerance *C 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 2.85 : +- 0.05 Tolerance mm

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Start of delivery blocking

*NW after s.o.d. : 7.00 Tolerance : +- 0.50 Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 9.85 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 78.5

Tolerance cm3/1000 strokes : +- 1.0	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Check tolerance cm3/1000s. : + 3.0	cm3/1000s. ; +- 3.0 Spreed Tolerance
Spreed	cm3/1000 strokes : 3.5 Check tolerance
Tolerance cm3/1000 strokes : 3.5	cm3/1000s. : 6.0
Check tolerance cm3/1000s. : 6.0	CONTROL LEVER
Rated speed rpm : 500	control lever position degree : 95.0 tolerance degree : +- 4.0
Rack travel in mm : 5.10 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 18.5	RATED SPEED rack travel mm : 8.80 Rated speed rpm : 1165 Tolerance 1/min : + 5
Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.5 Spreed	rack travel mm : 5.40 Rated speed rpm : 1235 Tolerance 1/min : +- 5
Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 5.5	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1400 rack travel mm : 5.40 Rated speed rpm : 1240
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION	LOW IDLE
control Lever position degree : -3 Rated speed rpm : 800	control lever position degree : 80.0 tolerance degree : +- 4.0
Rack travel in mm : 0.50 Tolerance mm : +- 0.20	Control lever difference Grad: 15.0 tolerance degree: +- 6.0
governor spring pre-tension click setting x : 2.25	Setting point w/out bumper spring Rated speed rpm : 500
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 4.60 Tolerance mm : +- 0.10
Rated speed rpm : 1100	Rated speed rpm : 100
Aneroid pressure hPa : -	CRT mm min. : > 19.00
Del. quantity cm3/1000 strokes : 78.5	Testing:

Rated speed rpm : rack travel mm : 500 5.10 Tolerance mm : +- 0.10

TORQUE CONTROL

Rated speed rpm : 1100 rack travel mm : 9.85 : +- 0.05 Tolerance mm

Rated speed rpm : 800 10.90 rack travel mm : Tolerance mm : +- 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 008 Rated speed rom : Del. quantity cm3/1000 strokes : 90.5

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : ← 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 ; 20.50 rack travel mm Tolerance mm : **←** 0.50 Del. quantity cm3/1000 strokes : 120.5 Tolerance

cm3/1000 strokes : +- 10.0

Check tolerance

cm3/1000S. : +- 15.0

LOW IDLE

Rated speed rpm : 500

Rack travel in mm : 5.10 Tolerance mm : +-0.10

Del. quantity

cm3/1000 strokes : 18.5

Tolerance

cm3/1000 strokes : +- 2.0 Check tolerance

cm3/1000S. : +- 4.5 Spreed

Tolerance

cm3/1000 strokes : 3.5

Check tolerance

cm3/1000s. 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 13.05.97

Test oil

: ISO 4113

Combination No. : F 002 A0Z 043

Injection pump

Pump designation : PES6A95D320/3RS2881

EP type number : 9 410 037 215

Governor

Governer design. : RSV500...1100A00925R

Governer no. : F 002 A20 233

Cust. part No. : 3932478

Customer-spec. information

Customer : CDC

Motor

: 6BT

Power KW

: 90.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. *C

Tolerance °C

: **←** 2.0

Overflow valve : 2 417 413 093

Inlet press. bar :

2.0

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

: 208.5

Tolerance bar : ← 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : \leftarrow 1.50

Firing order : 1-5- 3- 6- 2-

: 4

: 0-60-120-180-240 Phasing

: -300

Start of delivery blocking

*NW after s.o.d. : 7.00 Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 10.85

Tolerance mm : +- 0.05

	+ Aneroid pressure
Del. quantity cm3/1000 strokes : 86.0	hPa : 900 Del. quantity
Tolerance	+ cm3/1000 strokes : 86.0 + Tolerance
cm3/1000 strokes : +- 1.0	cm3/1000 strokes : + 1.0 Check tolerance
Check tolerance cm3/1000s. : +- 3.0	- cm3/1000s. : + 3.0 + Spreed - Tolerance
Spreed	cm3/1000 strokes : 3.5
Tolerance cm3/1000 strokes : 3.5	cm3/1000s. : 6.0
Check tolerance cm3/1000S. : 6.0	CONTROL LEVER
500	control lever position degree : 94.0
Rated speed rpm : 500	+ tolerance degree : +- 4.0
Rack travel in mm : 5.40 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 18.5	RATED SPEED rack travel mm : 9.80 Rated speed rpm : 1165 Tolerance 1/min : + 5
Tolerance cm3/1000 strokes : +- 2.0 Check tolerance	rack travel mm : 6.00 Rated speed rpm : 1225
cm3/1000S. : + 4.5 Spreed	Tolerance 1/min : +- 5
Tolerance cm3/1000 strokes : 3.5	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1300
Check tolerance cm3/1000S. : 5.5	+
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 6.00 Rated speed rpm : 1230 Tolerance 1/min : + 15
	+
GUIDE SLEEVE POSITION	LOW IDLE
control lever position degree : - 3 Rated speed rpm : 800	control lever position degree : 80.0 tolerance degree : +- 4.0
Rack travel in mm : 0.50 Tolerance mm : + 0.20	Control lever difference Grad: 14.0 tolerance degree: +- 6.0
governor spring pre-tension	Setting point w/out bumper spring
click setting x : 3.50	Rated speed rpm : 500
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 4.90 Tolerance mm : +- 0.10
Rated speed rpm : 1100	Rated speed rpm : 100

: > 19.00 CRT mm min. Testing:

500 Rated speed rpm 5.40 rack travel mm : : +- 0.10 Tolerance mm

TORQUE CONTROL Rated speed rpm : 1100 rack travel mm 10.85 : +- 0.05 Tolerance mm

Rated speed rpm 008 rack travel mm 11.55 Tolerance mm : **←** 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

008 Rated speed rpm : Pressure hPa

MEASUREMENT

008 Pressure hPa 11.05 rack travel mm : : + 0.30 Tolerance mm

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

900 hPa 008 Rated speed rpm

Del. quantity cm3/1000 strokes : 96.0

Tolerance

cm3/1000 strokes : \leftarrow 2.0 Check tolerance

cm3/1000s.

STARTING FUEL DELIVERY

100 Rated speed rpm 20.50 : rack travel mm : **+-** 0.50 Tolerance mm

Del. quantity

cm3/1000 strokes : 120.5

Tolerance cm3/1000 strokes : +- 10.0

Check tolerance

: **←** 15.0 cm3/1000s.

LOW IDLE

500 Rated speed rpm :

Rack travel in mm : 5.40 Tolerance mm : +- 0.10

Del. quantity

cm3/1000 strokes : 18.5 Tolerance

cm3/1000 strokes : \leftarrow 2.0 Check tolerance

cm3/1000s.

4.5 Spreed

Tolerance

cm3/1000 strokes : 3.5

Check tolerance

cm3/1000s. 5.5

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 13.05.97 Edition : ISO 4113 Test oil Combination No. : F 002 A0Z 061 Injection pump Pump designation : PES4A95D320/3RS2927 EP type number : F 002 A10 017 Governor Governer design. : RSV475...1100A2C941R Governer no. : F 002 A20 242 Cust. part No. : 3930143 Customer—spec. information Customer : CDC : 4BNA3.9 Motor : 54.0 Power KW TEST BENCH REQUIREMENTS Inlet line : 3.2 Test oil inlet temp. *C 40 Tolerance °C 2.0 Overflow valve : 1 417 413 093 Inlet press. bar : 2.0 Tolerance bar $: \leftarrow 0.1$ Test nozzle holde : 1 688 901 101 assembly Opening pressure 208.5 bar : +- 1.5 Tolerance bar

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600 **REMARKS** (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____ BEGINNING OF DELIVERY Test pressure bar : 17.0 Tolerance bar : + 1.0 Prestroke mm : 2.85 Tolerance mm : + 0.05 Check tolerance mm : +- 0.10Rack travel in mm : 10.50 Tolerance mm : +- 1.50 Firing order : 1-3-4-2 : 0-90-180-270 : +- 0.50 Phasing Tolerance Check tolerance °NW : +- 0.75 Start of delivery blocking *NW after s.o.d. : 8.25 Tolerance : +- 0.50 Check tolerance °NW : +- 0.75 Barrel no. : 1 BASIC SETTING Rated speed rpm : 1100 Rack travel in mm: 9.75 Tolerance mm : + 0.05

Del. quantity	Aneroid pressure
cm3/1000 strokes : 84.5	hPa : - Del. quantity
Tolerance	cm3/1000 strokes : 84.5
cm3/1000 strokes : +- 1.0 +	Tolerance
+	cm3/1000 strokes : + 1.0
Check tolerance	Check tolerance
cm3/1000s. : + 3.0 +	cm3/1000s. : +- 3.0
+	Spreed
Spreed	Tolerance cm3/1000 strokes : 3.5
Tolerance	cm3/1000 strokes : 3.5 Check tolerance
cm3/1000 strokes : 3.5	cm3/1000s. : 6.0
Check tolerance	
cm3/1000s. : 6.0 +	
	CONTROL LEVER
I	control lever
Rated speed rpm : 475	position degree : 97.0
+	tolerance degree : +- 4.0
Rack travel in mm: 4.60	•
Tolerance mm : + 0.10 +	RATED SPEED
Del. quantity +	rack travel mm : 8.70
cm3/1000 strokes : 13.5	Rated speed rpm : 1155
Tolerance + cm3/1000 strokes : + 2.0 +	Tolerance 1/min : ← 5
cm3/1000 strokes : + 2.0 + Check tolerance +	rack travel mm : 4.00
cm3/1000s. : + 4.5	Rated speed rpm : 1210
Spreed	Tolerance 1/min : +- 5
Tolerance	
cm3/1000 strokes : 3.5	rack travel mm : 0.85
Check tolerance	Tolerance mm : +- 0.55
cm3/1000s. : 5.5	Rated speed rpm : 1300
Ī	rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1220
WITH GOVERNOR	Tolerance 1/min : + 15
+	
+	
CUITA TO SECUE CONTITION	
GUIDE SLEEVE POSITION	LOW IDLE
Ţ	LOW IDEL
control lever	
position degree : - 3	control lever
Rated speed rpm : 800	position degree : 78.0
†	tolerance degree : +- 4.0
Rack travel in mm: 0.50	Control lever difference
Tolerance mm : + 0.20	Grad : 19.0
governor spring	tolerance degree : + 6.0
pre-tension +	
click setting x : 3.50	Setting point w/out bumper spring
+	
	Rated speed rpm : 475
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 4.10 Tolerance mm : + 0.10
Rated speed rpm : 1100	Tolerance mm : +- 0.10
Rated speed rpm : 1100	Rated speed rpm : 100
ı	

CRT mm min. : > 19.00

Testing:

Rated speed rpm : 475 rack travel mm : 4.60 Tolerance mm : +- 0.10

TORQUE CONTROL

Rated speed rpm : 1100 rack travel mm : 9.75 Tolerance mm : +-0.05

Rated speed rpm : 600

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 120.0

Tolerance

cm3/1000 strokes : + 10.0 Check tolerance

cm3/1000s. : + 15.0

LOW IDLE

Rated speed rpm : 475

Rack travel in mm : 4.60 Tolerance mm : + 0.10 Del. quantity

cm3/1000 strokes : 13.5

Tolerance cm3/1000 strokes : + 2.0

Check tolerance cm3/1000s. : + 4.5

Spreed . . . 4.3

Tolerance cm3/1000 strokes : 3.5

Check tolerance cm3/1000s. 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 11.05.95 Test oil : ISO 4113

Combination No. : 0 401 846 826

Injection pump

Pump designation : PE6P12OA32ORS3178 EP type number : 0 411 826 752

Governor

Governer design. : RQV250...1025PA921

: -2

Governer no. : 0 421 813 785

Cust. part No. : 470930-P06 V. 06/92

Customer-spec. information

Customer : VOLVO-TRUCK Motor : TD122FS

Power KW : 287.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration

damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 046

Inlet press. bar : 1.5

Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 019

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.65

Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50
Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Start of delivery mark

Tolerance : + 0.10

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Del. quantity

cm3/1000 strokes : 259.0

	+ Check tolerance
Tolerance cm3/1000 strokes : +- 1.0	cm3/1000s. : +- 4.0 Spreed
Check tolerance cm3/1000s. : +- 4.0	Tolerance cm3/1000 strokes : 5.0 Check tolerance
	cm3/1000s. : 9.0
Spreed	T
Tolerance cm3/1000 strokes : 5.0	CONTROL LEVER
Check tolerance cm3/1000s. : 9.0	control lever position degree : 65.0 tolerance degree : +- 4.0
Rated speed rpm : 250 Rack travel in mm : 4.95	control lever position degree : 120.0 tolerance degree : + 4.0
Tolerance mm : + 0.15 Del. quantity cm3/1000 strokes : 20.0	RATED SPEED
Tolerance cm3/1000 strokes : + 2.5	Tolerance 1/min : +- 5
Check tolerance cm3/1000s. : +- 5.0 Spreed Tolerance	+ rack travel mm : 4.00 + Rated speed rpm : 1155 + Tolerance 1/min : +- 15 +
cm3/1000 strokes : 5.0 Check tolerance cm3/1000S. : 7.0	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1250
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	+ control lever + position degree : 63.0 + tolerance degree : +- 4.0
control lever position degree : - 1 Rated speed rpm : 1130	control lever position degree : 10.0 tolerance degree : +- 4.0
Rack travel in mm : 16.50 Tolerance mm : +- 1.30	Setting point w/out bumper spring
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
Rated speed rpm : 700	CRT mm min. : > 6.40
Aneroid pressure hPa : 1200	Testing:
Del. quantity cm3/1000 strokes : 259.0 Tolerance	Rated speed rpm : 250 rack travel mm : 4.95 Tolerance mm : +- 0.15
cm3/1000 strokes : +- 1.0	Rated speed rpm : 325

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm	:	500
Pressure hPa	:	1200
rack travel mm	:	14.05
Tolerance mm	: -	⊢ 0.05

Rated speed rpm	:	500
Pressure hPa	:	_
rack travel mm	;	10.40
Tolerance mm	: +	- 0.10

MEASUREMENT

Rated	speed	rpm	:	500
-------	-------	-----	---	-----

Pressure hPa	:	780
rack travel mm	:	3.30
Tolerance mm	: +	- 0.20

Pressure hPa	:		105
rack travel mm	:		0.25
Tolerance mm	: .	+-	0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa	:	_
Rated speed rpm	:	700
Del. quantity		
cm3/1000 strokes	:	169.0
Tolerance		
cm3/1000 strokes	: +	- 1.0
Check tolerance		
cm3/1000S.	: +	- 4.0

STARTING FUEL DELIVERY

Rated speed rpm rack travel mm	: 100 : 20,50
Tolerance mm	: ← 0.50
Del. quantity cm3/1000 strokes	: 290.0
Tolerance cm3/1000 strokes Check tolerance	: ← 20.0
cm3/1000s.	: +- 24.0

LOW IDLE

Rated speed rpm	:		250	
TOCCT GITTEE TIME	-		4.95 0.15	
Del. quantity cm3/1000 strokes Tolerance	:		20.0	
cm3/1000 strokes	:	+-	2.5	
Check tolerance cm3/1000s. Spreed	:	+-	5.0	
Tolerance cm3/1000 strokes Check tolerance	:		5.0	
cm3/1000s.	:		7.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 09.09.97 Test oil : ISO 4113

Combination No. : 0 402 076 801A

Injection pump

Pump designation : PES6P120A1320/5RS337

: 2Y

EP type number : 0 412 026 793

Governor

Governer design. : RSV350...1050P1A641

Governer no. : 0 421 833 553

Cust. part No. : 1388638

Customer—spec. information Customer : SCANIA

Motor : DSI1172A,-C1157A

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration

damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-,5-3-6-2

: - 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance °NW : + 0.75

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

	1
Rack travel in mm : 15.65	+ Rated speed rpm : 700
Tolerance mm : +- 0.05	+ Aneroid pressure
Del. quantity	+ hPa : 1500 + Del. quantity
cm3/1000 strokes : 234.0	+ cm3/1000 strokes : 234.0
Tolerance	
cm3/1000 strokes : +- 1.0	+ Check tolerance
Check tolerance	+ cm3/1000s. : +- 7.0 + Spreed
cm3/1000s. : +- 7.0	Tolerance
2	+ cm3/1000 st: skes : 8.0
Spreed	+ Check tolerance + cm3/1000s. : 12.0
Tolerance	+
cm3/1000 strokes : 8.0	<u> </u>
Check tolerance	CONTROL LEVER
cm3/1000s. : 12.0	t control lever
	position degree : 34.0
	tolerance degree : +- 4.0
Rack travel in mm : 6.00	t control lever
Tolerance mm : + 0.20	position degree : 84.0
Del. quantity	tolerance degree : +- 4.0
cm3/1000 strokes : 20.0	†
Tolerance cm3/1000 strokes : +- 4.0	+ ASSEMBLY GOVERNOR SETTING
Check tolerance	T ASSEMBLY GOVERNON SETTING
cm3/1000s. : +- 6.0	Rated speed rpm : 750
Spreed	+ rack travel mm : 14.60
Tolerance cm3/1000 strokes : 5.0	+ Rated speed rpm : 788
Check tolerance	Tolerance 1/min : +- 4
cm3/1000s. : 9.0	rack travel mm : 4.00
	+
(D) CETTING OF THEETTON DUMO	rack travel mm : 0.85
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Tolerance mm : +- 0.55 Rated speed rpm : 850
MILL GOACHIAOK	t Rated speed Ppill . 050
	+ Rated speed rpm : 751
GUIDE SLEEVE POSITION	rack travel mm : 14.60
	Rated speed rpm : 789
control lever	+ Rated speed rpm : 789 + Tolerance 1/min : + 4
position degree : - 3	rack travel mm : 4.00
Rated speed rpm : 800	+
	rack travel mm : 0.85
Rack travel in mm: 0.50	+ Tolerance mm : + 0.55
Tolerance mm : +- 0.20	+ Rated speed rpm : 850
governor spring	
pre-tension	Rated speed rpm : 752
click setting x : 2.50	† rack travel mm : 14.60
	- T Rated speed rpm : 790
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Tolerance 1/min : +- 4

rack travel mm	: 4.00
rack travel mm	: 0.85
Tolerance mm	: 0.85 : + 0.55
Rated speed rpm	: 850
Rated speed rpm	: 753
rack travel mm	: 14.60
Rated speed rpm	: 791
Tolerance 1/min	
rack travel mm	: 4.00
rack travel mm	: 0.85 : +- 0.55
Tolerance mm Rated speed rpm	
nated speed (pill	. 050
Rated speed rpm	: 754
rack travel mm	: 14.60
Rated speed rpm Tolerance 1/min	: 792
	: +- 4 : 4.00
rack travel mm	
rack travel mm	: 0.85
Tolerance mm Rated speed rpm	: 0.85 : + 0.55 : 850
Mated Speed / piii	. 050
Rated speed rpm	
rack travel mm	: 14.60
Rated speed rpm	: 793
Tolerance 1/min	
rack travel mm	: 4.00
rack travel mm	: 0.85
Tolerance mm Rated speed rpm	: ← 0.55 : 850
Mated speed (pill	. 050
TORQUE CONTROL	
Rated speed rpm	: 700
rack travel mm	: 15.65
Tolerance mm	: ← 0.05
ANEROID/ALTITUDE	
COMPENSATOR TEST	

Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 13.50 : +- 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 240 : 14.00 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 450 : 15.05 : + 0.05
Aneroid pressure	
hPa	: -
Rated speed rpm	: 500
Del. quantity cm3/1000 strokes	: 500 : 188.0
Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	
Del. quantity cm3/1000 strokes Tolerance	: 188.0
Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 188.0 : ← 1.0

SETTING

Rated speed rpm : 500
Pressure hPa : 1500
rack travel mm : 15.65
Tolerance mm : + 0.05

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 09.09.97 Test oil : ISO 4113

Combination No. : 0 402 076 801B

Injection pump

Pump designation : PES6P12OA132O/5RS337

: 2Y

EP type number : 0 412 026 793

Governor

Governer design. : RSV350...1050P1A641

Governer no. : 9 421 833 553

Cust. part No. : 1388640

Customer—spec. information Customer : SCANIA

Motor : DSI1172A,-C1157A

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2

: - 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance $^{\circ}NW$: +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rack travel in mm : 15.55 Tolerance mm : +- 0.05	Rated speed rpm : 700 Aneroid pressure hPa : 1500
Del. quantity cm3/1000 strokes : 238.0	Del. quantity cm3/1000 strokes : 238.0 Tolerance
Tolerance cm3/1000 strokes : + 1.0	cm3/1000 strokes : +- 1.0 Check tolerance
Check tolerance - 7.0 + 7.0	cm3/1000s. : +- 7.0 Spreed Tolerance
Spreed	<pre>cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0</pre>
Tolerance cm3/1000 strokes : 8.0	
Check tolerance cm3/1000s. : 12.0	CONTROL LEVER
	<pre>control lever position degree : 34.0 tolerance degree : +- 4.0</pre>
Rack travel in mm: 6.00 Tolerance mm: + 0.20 Del. quantity cm3/1000 strokes: 20.0	<pre>control lever position degree : 84.0 tolerance degree : + 4.0</pre>
Tolerance + 4.0 + Check tolerance +	ASSEMBLY GOVERNOR SETTING
cm3/1000s. : + 6.0 + 5preed	Rated speed rpm : 750 rack travel mm : 14.50
Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0	Rated speed rpm : 788 Tolerance 1/min : +- 4 rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 850
GUIDE SLEEVE POSITION	Rated speed rpm : 751 rack travel mm : 14.50
control lever position degree : - 3 Rated speed rpm : 800	Rated speed rpm : 789 Tolerance 1/min : +- 4 rack travel mm : 4.00
Rack travel in mm : 0.50 Tolerance mm : + 0.20	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 850
governor spring pre-tension click setting x : 2.50	Rated speed rpm : 752 rack travel mm : 14.50
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 790 Tolerance 1/min : +- 4

rack travel mm	: 4.00
rack travel mm Tolerance mm Rated speed rpm	: +- 0.55
Rated speed rpm	: 753
rack travel mm	: 14.50
Rated speed rpm	: 791
Tolerance 1/min	: +- 4
rack travel mm	: 4.00
rack travel mm	: 0.85
Tolerance mm	: +- 0.55
Rated speed rpm	: 850
Rated speed rpm	: 754
rack travel mm	: 14.50
Rated speed rpm Tolerance 1/min rack travel mm	: +- 4
rack travel mm	: 0.85
Tolerance mm	: + 0.55
Rated speed rpm	: 850
Rated speed rpm rack travel mm	: 14.50
Rated speed rpm	: 793
Tolerance 1/min	: +- 4
rack travel mm	: 4.00
rack travel mm	: 0.85
Tolerance mm	: + 0.55
Rated speed rpm	: 850
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 15.55 : + 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm	: 500
Pressure hPa	: 1500
rack travel mm	: 15.55
Tolerance mm	: ← 0.05

Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 13.50 : + 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 240 : 14.00 : ← 0.20
Pressure hPa rack travel mm Tolerance mm	: 450 : 15.05 : + 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa	: -
Aneroid pressure	RACTERISTICS : - : 500 : 188.C
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: - : 500
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: - : 500 : 188.C

Note remarks

Refer to Servic. Info for test and adjustment inst actions.

See microcard(s W400/...

: 09.09.97 Edition Test oil : ISO 4113

Combination No. : 0 402 076 8010

Injection pump

Pump designation : PES6P120A1320/5RS337

: 2Y

EP type number : 0 412 026 793

Governor

Governer design. : RSV350...1050P1A641

Governer no. : 0 421 833 553

Cust. part No. : 1397107

Customer-spec. information

Customer : SCANIA

: DSI1172A,-C1157A Moto?

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration

damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

: 251.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

2.0 x inside diameter :

600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : +- 1.0

: 4.45 Prestroke mm

: +- 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50

Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2

: - 4

Phasing : 0-60-120-180-240

: -300

: +- 0.30 To!erance

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

: +- 0.75 tolerance °NW

Barrel no. : 1

BASIC SETTING

	1
Rack travel in mm : 15.85 Tolerance mm : + 0.05	Rated speed rpm : 700 Aneroid pressure
	+ hPa : 1500
Del. quantity cm3/1000 strokes : 240.0	Del. quantity cm3/1000 strokes : 240.0 Tolerance
Tolerance cm3/1000 strokes : + 1.0	cm3/1000 strokes : +- 1.0 Check tolerance
Check tolerance	+ cm3/1000s. : +- 7.0 + Spreed
cm3/1000s. : + 7.0	Tolerance : 8.0
Spreed	Check tolerance cm3/1000s. : 12.0
Tolerance cm3/1000 strokes : 8.0	<u> </u>
Check tolerance cm3/1000s. : 12.0	CONTROL LEVER
	position degree : 34.0
	tolerance degree : +- 4.0
Rack travel in mm : 6.00	control lever
Tolerance mm : + 0.20	position degree : 84.0
Del. quantity cm3/1000 strokes : 20.0	tolerance degree : +- 4.0
Tolerance cm3/1000 strokes : +- 4.0 Check tolerance	ASSEMBLY GOVERNOR SETTING
cm3/1000s. : +- 6.0	Rated speed rpm : 750
Spreed	rack travel mm : 14.80
Tolerance	700
cm3/1000 strokes : 5.0	+ Rated speed rpm : 788 + Tolerance 1/min : +- 4
Check tolerance cm3/1000s. : 9.0	+ rack travel mm : 4.00
CIID/10003	+ Tack Crave Cilinii
	rack travel mm : 0.85
(B) SETTING OF INJECTION PUMP	Tolerance mm : +- 0.55
WITH GOVERNOR	+ Rated speed rpm : 850 +
	+ - + Rated speed rpm : 751
GUIDE SLEEVE POSITION	rack travel mm : 14.80
	+ Rated speed rpm : 789
control lever	+ Tolerance 1/min : +- 4
position degree : - 3	rack travel mm : 4.00
Rated speed rpm : 800	†
0.50	rack travel mm : 0.85
Rack travel in mm : 0.50 Tolerance mm : + 0.20	Tolerance mm : +- 0.55 Rated speed rpm : 850
Tolerance mm : +- 0.20	T Nated Speed (bill . 030
governor spring	+
pre-tension	Rated speed rpm : 752
click setting x : 2.50	rack travel mm : 14.80
	- + Rated speed rpm : 790
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance 1/min : +- 4

rack travel mm	: 4.00
rack travel mm	: 0.85
Tolerance mm	: +- 0.55 : 850
Rated speed rpm	; 650
Rated speed rpm	: 753
rack travel mm	: 14.80
Rated speed rpm Tolerance 1/min	: 791
Tolerance 1/min	: +- 4
rack travel mm	: 4.00
rack travel mm	
Tolerance mm Rated speed rpm	
Rated Speed Ppill	. 650
Rated speed rpm rack travel mm	: 754
rack travel mm	: 14.80
Rated speed rpm	: 792 : +- 4
Tolerance 1/min	: +- 4
rack travel mm	: 4.00
rack travel mm	: 0.85 : + 0.55
Tolerance mm	: +- 0.55 : 850
Rated speed rpm	. 830
Rated speed rpm	: 755
Rated speed rpm rack travel mm	: 14.80
Rated speed rpm	: 793
Tolerance 1/min	: +- 4
rack travel mm	: 4.00
rack travel mm	: 0.85
Tolerance mm Rated speed rpm	: +- 0.55 : 850
Rated Speed (pill	. 050
TORQUE CONTROL Rated speed rpm	: 700
rack travel mm	: 15.85
Tolerance mm	: + 0.05
ANEROID/ALTITUDE	
COMPENSATOR TEST	
SETTING	
Rated speed rpm	: 500
Pressure hPa	: 1500
rack travel mm	: 15.85
Tolerance mm	: +- 0.05

MEASUREMENT Rated speed rpm : 500 Pressure hPa : 240 rack travel mm : 14.00 Tolerance mm : + 0.20 Pressure hPa : 450 rack travel mm : 15.05 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 188.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0	Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 13.50 : + 0.20
Pressure hPa : 240 rack travel mm : 14.00 Tolerance mm : + 0.20 Pressure hPa : 450 rack travel mm : 15.05 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 188.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	MEASUREMENT	
rack travel mm : 14.00 Tolerance mm : + 0.20 Pressure hPa : 450 rack travel mm : 15.05 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 188.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	Rated speed rpm	: 500
rack travel mm : 15.05 Tolerance mm : +- 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 188.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance	rack travel mm	: 14.00
Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 188.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance	rack travel mm	: 15.05
Del. quantity cm3/1000 strokes : 188.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance		
cm3/1000 strokes : +- 1.0 Check tolerance	FUEL DELIVERY CHA Aneroid pressure hPa	RACTERISTICS
	FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity	RACTERISTICS : - : 500
	FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	RACTERISTICS : - : 500 : 188.0
	FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: - : 500 : 188.0 : + 1.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 09.09.97

Test oil

: ISO 4113

Combination No. : 0 402 076 802A

Injection pump

Pump designation : PES6P120A1320/5RS337

EP type number

: 0 412 026 794

Governor

Governer design. : RSV350...1050P8A643

Governer no.

: 0 421 833 555

Cust. part No. : 1388635

Customer—spec. information

Customer : SCANIA

Motor

: D311171A,-C1156A

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration

damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C

40

Tolerance °C

Overflow valve

: 1 417 413 025

2.5

Inlet press. bar : Tolerance bar : +-

0.1

Test nozzle holde

assembly

: 1 688 901 104

Opening pressure

251.5

Tolerance bar

: **←** 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

2.0

x length mm

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : +- 1.0

Prestroke mm 4.45

: +- 0.05 Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

: +- 1.50 Tolerance mm

Firing order : 1-5- 3- 6- 2-

: 4

: 0-60-120-180-240 Phasing

: -300

: +- 0.50 Tolerance

Check

tolerance *NW : + 0.75

Start of delivery mark

: +- 0.30 Tolerance

Check

tolerance °NW

: **←** 0.75

Barrel no.

: 1

BASIC SETTING

Rated speed rpm :

700

ı	
Rack travel in mm: 14.55 Tolerance mm: +- 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 209.0	Rated speed rpm : 700 Aneroid pressure hPa : 1500
Tolerance cm3/1000 strokes : + 1.0	Del. quantity cm3/1000 strokes : 209.0 Tolerance
Check tolerance cm3/1000s. : + 6.0	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 6.0
Spreed	Spreed Tolerance
Tolerance cm3/1000 strokes : 8.0	cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
Check tolerance cm3/1000s. : 12.0	
	CONTROL LEVER
Rated speed rpm : 350	control lever position degree : 54.0
Rack travel in mm : 5.10 Tolerance mm : + 0.10 Del. quantity	tolerance degree : +- 4.0 control lever
cm3/1000 strokes : 18.0 +	position degree : 104.0 tolerance degree : + 4.0
cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0	RATED SPEED rack travel mm : 13.50
Spreed + Tolerance + cm3/1000 strokes : 4.0 +	Rated speed rpm : 1095 Tolerance 1/min : +- 5 Check
Check tolerance cm3/1000s. : 8.0	speed 1/min : +- 10
(B) SETTING OF INJECTION PUMP	rack travel mm : 4.00 Rated speed rpm : 1190 Tolerance 1/min : +- 15
WITH GOVERNOR	Check speed 1/min : +- 20
GUIDE SLEEVE POSITION	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1350
control lever position degree : - 3 Rated speed rpm : 800	rack travel mm : 4.00 Rated speed rpm : 1210 Tolerance 1/min : +- 15
Rack travel in mm: 0.50	Check speed 1/min : ← 20
Tolerance mm : + 0.20	
governor spring pre-tension click setting x : 5.50	LOW IDLE
‡	

control lever	
position degree tolerance degree	: 73.0 : + 4.0
control lever position degree tolerance degree	: 23.0 : +- 4.0
Setting point w/c	but bumper spring
Rated speed rpm rack travel mm Tolerance mm	: 350 : 4.60 : ← 0.10
Testing:	
Rated speed rpm rook travel mm Tolerance mm	: 350 : 5.10 : + 0.10
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 14.55 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1050 : 14.55 : +- 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mum Tolerance mum	: 500 : 1500 : 14.55 : ← 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 12.00 : + 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 410 : 12.60 : +- 0.20
Pressure hPa rack travel mm Tolerance mm	: 670 : 13.95 : + 0.05

FUEL DELIVERY CHAP	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 1500 : 1050 : 127.0 : + 4.0
cm3/1000s.	: +- 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 500 : 150.0 : + 1.0 : + 4.0
LOW IDLE	
Rated speed rpm	: 350
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	: +- 0.10
Tolerance cm3/1000 strokes	
Check tolerance cm3/1000s. Spreed Tolerance	: +- 6.0
cm3/1000 strokes Check tolerance	: 4.0
cm3/1000s.	: 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 09.09.97 : ISO 4113

Combination No. : 0 402 076 802B

Injection pump

Pump designation : PES6P120A1320/5RS337

EP type number : 0 412 026 794

Governor

Governer design. : RSV350...1050P8A643

Governer no. : 0 421 833 555

Cust. part No. : 1388636

Customer-spec. information

Customer : SCANIA

Motor

: DSI1171A,-C1156A

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration

damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C 40 Tolerance *C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

: 251.5 har : **←** 1.5 Tolerance bar

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm 4.45 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.30

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

1	
Rack travel in mm: 15.25	
Tolerance mm : +- 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity	Rated speed rpm : 700
cm3/1000 strokes : 225.0	Aneroid pressure
T	hPa : 1500
Tolerance + 1.0 + 1.0	Del. quantity cm3/1000 strokes : 225.0
T 1.0	Talerance
Check tolerance	$cm3/1000$ strokes : \leftarrow 1.0
$cm3/1000s$. : \leftarrow 7.0	Check tolerance
Spreed	cm3/1000S. : ← 7.0 Spreed
T T	Tolerance
Tolerance	cm3/1000 strokes : 8.0
cm3/1000 strokes : 8.0	Check tolerance
Check tolerance	cm3/1000s. : 12.0
cm3/1000s. : 12.0	
İ	CONTROL LEVER
Rated speed rpm : 350	control lever
+	position degree : 49.0
Rack travel in mm: 5.10	tolerance degree : 4.0
Tolerance mm : + 0.10 + Del. quantity +	control lever
cm3/1000 strokes : 18.0	position degree : 99.0
Tolerance	tolerance degree : +- 4.0
cm3/1000 strokes : +- 3.0 +	0.4752 .00573
Check tolerance + 6.0 +	RATED SPEED rack travel mm : 14.20
Spreed	Rated speed rpm : 945
Tolerance	Tolerance 1/min : + 5
cm3/1000 strokes : 4.0	Check
Check tolerance /- cm3/1000s. : 8.0 +	speed 1/min : ÷- 10
+ 10000	rack travel mm : 4.00
†	Rated speed rpm : 1045
(B) SETTING OF INJECTION PUMP	Tolerance 1/min : +- 15 Check
WITH GOVERNOR	speed 1/min : +- 20
‡	5pccd 17mm
+	rack travel mm : 0.85
GUIDE SLEEVE POSITION +	Tolerance mm : +- 0.55
Ţ	Rated speed rpm : 1200
control lever	rack travel mm : 4.00
position degree : - 3	Rated speed rpm : 1065
Rated speed rpm : 800	Tolerance 1/min : + 15 Check
Rack travel in mm: 0.50	speed 1/min : +- 20
Tolerance mm : +- 0.20	
+	
governor spring + pre-tension +	
click setting x : 5.00	LOW IDLE
+	
+	

control lever position degree tolerance degree	: 73.0 : +- 4.0
control lever position degree tolerance degree	: 23.0 : + 4.0
Setting point w/c	out bumper spring
Rated speed rpm rack travel mm Tolerance mm	: 350 : 4.60 : + 0.10
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 350 : 5.10 : + 0.10
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 15.25 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 900 : 15.25 : ← 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 15.25 : ← 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 13.10 : +- 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 450 : 13.60 : +- 0.20
Pressure hPa rack travel mm Tolerance mm	: 660 : 14.65 : +- 0.05

neroid pressure Pa Pated speed rpm	:	,	1500 900	
el. quantity m3/1000 strokes olerance	:		216.0	
m3/1000 strokes theck tolerance	:	+-	4.0	
m3/1000s.	:	+	6.0	
neroid pressure	•			
eated speed rpm el. quantity	:		500	
m3/1000 strokes Tolerance	:		183.0	
m3/1000 strokes theck tolerance	:	+	1.0	
m3/1000s.	:	+-	5.0	
OW IDLE				
OW IDLE	:		350	
lated speed rpm lack travel in mm olerance mm		+-	350 5.10 0.10	
lated speed rpm lack travel in mm olerance mm mel. quantity m3/1000 strokes	:	+-	5.10	
Pated speed rpm Pack travel in mm Polerance mm Poel. quantity Pm3/1000 strokes Polerance Pm3/1000 strokes	:	+-	5.10 0.10 18.0	
tated speed rpm tack travel in mm tolerance mm tel. quantity tm3/1000 strokes tolerance tm3/1000 strokes theck tolerance tm3/1000s. thereed	:	+-	5.10 0.10 18.0	
tated speed rpm tack travel in mm tolerance mm tel. quantity tm3/1000 strokes tolerance tm3/1000 strokes theck tolerance tm3/1000s.	:	+-	5.10 0.10 18.0 3.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 09.09.97 Test oil : ISO 4113

Combination No. : 0 402 076 8020

Injection pump

Pump designation : PES6P12OA1320/5RS337

EP type number : 0 412 026 794

Governor

Governer design. : RSV350...1050P84643

Governer no. : 0 421 833 555

Cust. part No. : 1388637

Customer-spec. information

Customer : SCANIA

Motor

: DSI1171A,-C1156A

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration

damper

(RoBo diaphragm) : 3.1

Test oil inlet

Tolerance °C :

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5

REMARKS

x inside diameter :

(A) INJECTION PUMP SETTING VALUES

Test lines : 1 680 750 008

2.0

Outside diameter : 6.0

x length mm : 600

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-5- 3- 6- 2-

: 4

Phasing : 0-60-120-180-240

: −300 Tolerance : ← 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : + 0.30

Check

tolerance °NW : ← 0.75

Barrel no. : 1

BASIC SETTING

1	
Rack travel in mm: 15.35	
Tolerance mm : +- 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP
10(0) 41.00 11.11	- TOLL LONG DELIVERY AT TOLL LONG STOT
Del. quantity	Rated speed rpm : 700
cm3/1000 strokes : 226.0	- Aneroid pressure
	- hPa : 1500
Tolerance	Del. quantity
cm3/1000 strokes : +- 1.0	- cm3/1000 strokes : 226.0
Check tolerance	- Tolerance - cm3/1000 strokes : +- 1.0
cm3/1000s. : +- 7.0	Check tolerance
	cm3/1000S. : +- 7.0
Spreed	Spreed
+	Tolerance
Tolerance	cm3/1000 strokes : 8.0
cm3/1000 strokes : 8.0	Check tolerance
Check tolerance	- cm3/1000s. : 12.0
cm3/1000s. : 12.0	
	CONTROL LEVER
+	-
Rated speed rpm : 350	control lever
5.40	position degree : 54.0
Rack travel in mm: 5.10 Tolerance mm: : +- 0.10	tolerance degree : +- 4.0
Tolerance mm : +- 0.10 Del. quantity	control lever
cm3/1000 strokes : 18.0	position degree : 104.0
Tolerance	tolerance degree : +- 4.0
cm3/100C strokes : +- 3.0	•
Check tolerance	RATED SPEED
$cm3/1000s$. : \leftarrow 6.0	rack travel mm : 14.30
Spreed	Rated speed rpm : 1095
Tolerance - cm3/1000 strokes : 4.0	Tolerance 1/min : +- 5 - Check
Chack tolerance	speed 1/min : +- 10
cm3/1000s. : 8.0	5, 10
	rack travel mm : 4.00
+	Rated speed rpm : 1195
(B) SETTING OF INJECTION PUMP	Tolerance 1/min : +- 15
WITH GOVERNOR	Check
1	- speed 1/min : +- 20
	rack travel mm : 0.85
GUIDE SLEEVE POSITION	Tolerance mm : +- 0.55
	Rated speed rpm : 1350
control lever	rack travel mm : 4.00
position degree : - 3	Rated speed rpm : 1225
Rated speed rpm : 800	Tolerance 1/min : +- 15 - Check
Rack travel in mm: 0.50	- theck - speed 1/min : +- 20
Tolerance mm : + 0.20	L
1	L
governor spring	_
pre-tension +	
click setting x : 5.75	LOW IDLE

control lever position degree tolerance degree	: 73.0 : + 4.0
control lever position degree tolerance degree	: 23.0 : + 4.0
Setting point w/ou	ut bumper spring
Rated speed rpm rack travel mm Tolerance mm	: 350 : 4.60 : + 0.10
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 350 : 5.10 : + 0.10
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 15.35 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1050 : 15.35 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 15.35 : ← 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 13.10 : + 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 450 : 13.60 : ← 0.20
Pressure hPa rack travel mm Tolerance mm	: 660 : 14.65 : ← 0.05

Aneroid pressure hPa Rated speed rpm	: 1500 : 1050
Del. quantity cm3/1000 strokes	: 209.0
Tolerance cm3/1000 strokes Check tolerance	: ← 4.0
cm3/1000s.	: +- 6.0
Aneroid pressure	
hPa Rated speed rpm	: – : 500
Del. quantity cm3/1000 strokes	: 183.0
Tolerance cm3/1000 strokes	: ← 1.0
Check tolerance	
cm3/1000s.	: ← 5.0
	: +- 5.0
	: +- 5.0
cm3/1000s.	: + 5.0 : 350
LOW IDLE Rated speed rpm Rack travel in mm Tolerance mm	: 350
LOW IDLE Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	: 350 : 5.10
LOW IDLE Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 350 : 5.10 : +- 0.10
LOW IDLE Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 350 : 5.10 : +- 0.10 : 18.0
LOW IDLE Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 350 : 5.10 : +- 0.10 : 18.0 : +- 3.0
LOW IDLE Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: 350 : 5.10 : +- 0.10 : 18.0 : +- 3.0 : +- 6.0

FUEL DELIVERY CHARACTERISTICS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

Test oil

: 09.09.97 : ISO 4113

Combination No. : 0 402 076 802D

Injection pump

Pump designation : PES6P12OA1320/5RS337

EP type number : 0 412 026 794

Governor

Governer design. : RSV350...1050P8A643

Governer no.

: 0 421 833 555

Cust. part No. : 1359594

Customer-spec. information

Customer

: SCANIA

Motor

: DSI1171A,-C1156A

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration

damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C

40

Tolerance °C

: + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar :

2.5

Tolerance bar : + 0.1

Test nozzle holde

assumbly

: 1 688 901 104

Opening pressure

har

251.5

Tolerance bar : +- 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +- 1.0

Prestroke mm : 4.45 Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50

Tolerance mm : ← 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.30

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

1	
Rack travel in mm: 15.15 Tolerance mm: + 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 221.0	Rated speed rpm : 700 Aneroid pressure
Tolerance cm3/1000 strokes : +- 1.0	hPa : 1500 Del. quantity cm3/1000 strokes : 221.0
Check tolerance cm3/1000S. : + 7.0	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Spreed	cm3/1000s. : +- 7.0 Spreed
Tolerance cm3/1000 strokes : 8.0	Tolerance cm3/1000 strokes : 8.0 Check tolerance
Check tolerance cm3/1000s. : 12.0	cm3/1000s. : 12.0
	CONTROL LEVER
Rated speed rpm : 350	control lever position degree : 54.0
Rack travel in mm: 5.10 Tolerance mm: + 0.10	tolerance degree : +- 4.0 control lever
Del. quantity cm3/1000 strokes : 18.0 Tolerance	position degree : 104.0 tolerance degree : +- 4.0
cm3/1000 strokes : + 3.0	RATED SPEED rack travel mm : 13.10
Spreed Tolerance	Rated speed rpm : 1095 Tolerance 1/min : +- 5
cm3/1000 strokes : 4.0 + Check tolerance cm3/1000s. : 8.0 + Check tolerance cm3/1000s.	Check speed i/min : +- 10
‡	rack travel mm : 4.00 Rated speed rpm : 1185
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Tolerance 1/min : +- 15 Check speed 1/min : +- 20
GUIDE SLEEVE POSITION	rack travel mm : 0.85 Tolerance mm : +- 0.55
‡	Rated speed rpm : 1350
control lever position degree : - 3 Rated speed rpm : 800	rack travel mm : 4.00 Rated speed rpm : 1205 Tolerance 1/min : +- 15
Rack travel in mm: 0.50 Tolerance mm: + 0.20	Check speed 1/min : +- 20
governor spring + pre-tension +	
click setting x : 6.00	LOW IDLE
+	

control lever position degree tolerance degree	: 73.0 : + 4.0
control lever position degree tolerance degree	: 23.0 : + 4.0
Setting point w/o	ut bumper spring
Rated speed rpm rack travel mm Tolerance mm	: 350 : 4.60 : + 0.10
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 350 : 5.10 : + 0.10
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 15.15 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1050 : 14.15 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 925 : 14.60 : +- 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 15.15 : +- 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 12.10 : + 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 510 : 13.10 : + 0.20

Pressure hPa rack travel mm Tolerance mm	: 780 : 14.50 : + 0.05
FUEL DELIVERY CHA	RACTERISTICS
TOLL DELIVERY CHA	MACIENTOTICS
	
Aneroid pressure	4500
hPa	: 1500
Rated speed rpm Del. quantity	: 1050
cm3/1000 strokes	: 189.0
Tolerance	. 107.0
cm3/1000 strokes	: +- 4.0
Check tolerance	
cm3/1000S.	: +- 6.0
Aneroid pressure	
hPa	: -
Rated speed rpm	: 500
Del. quantity cm3/1000 strokes	. 150.0
Tolerance	: 150.0
cm3/1000 strokes	: +- 1.0
Check tolerance	· · ·
cm3/1000S.	: +- 4.0

LOW IDLE			
Rated speed rpm	:		350
Rack travel in mm Tolerance mm Del. quantity	:	+-	5.10 0.10
cm3/1000 strokes Tolerance	:		18.0
cm3/1000 strokes Check tolerance	:	+-	3.0
cm3/1000S. Spreed Tolerance	:	+	6.0
cm3/1000 strokes Check tolerance	:		4.0
cm3/1000s.	:		8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 09.09.97 Test oil : ISO 4113

Combination No. : 0 402 076 811A

Injection pump

Pump designation : PES6P12OA1320/5RS338

: 0

EP type number :

Governor

Governer design. : RSV350...1100P8A664

Governer no. :

Cust. part No. : 1393866

Customer-spec. information Customer : SCANIA

Motor : DS9 93M, DSC9 47A

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.45 Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance °NW : + 0.75

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 13.85 Tolerance mm: + 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP
<u> </u>	Rated speed rpm : 700
Del. quantity +	Aneroid pressure
cm3/1000 strokes : 196.0	hPa : 1500
	Del. quantity
Tolerance	cm3/1000 strokes : 196.0
cm3/1000 strokes : +- 1.0	Tolerance
	cm3/1000 strokes : + 1.0
Check tolerance	Check tolerance
cm3/1000s. : +- 6.0	cm3/1000s. : +- 6.0
CIII37 10003 0.0	
	Spreed
Spreed	Tolerance
†	cm3/1000 strokes : 8.0
Tolerance +	Check tolerance
cm3/1000 strokes : 8.0 +	cm3/1000s. : 12.0
1	
Check tolerance	
cm3/1000s. : 12.0	
T	CONTROL LEVER
	CONTROL LEVER
†	and the land
	control lever
Rated speed rpm : 350	position degree : 56.0
+	tolerance degree : +- 4.0
Rack travel in mm: 5.20	-
Tolerance mm : +- 0.10	control lever
Del. quantity	position degree : 106.0
cm3/1000 strokes : 20.0	tolerance degree : + 4.0
Tolerance	toterance degree 4.0
	DATES COSES
cm3/1000 strokes : $+$ 3.0 $+$	RATED SPEED
Check tolerance +	rack travel mm : 12.80
cm3/1000s. : \leftarrow 6.0	Rated speed rpm : 1145
Spreed	Tolerance 1/min : +- 5
Tolerance	Check
cm3/1000 strokes : 4.0	speed 1/min : +- 10
Check tolerance	
cm3/1000s. : 8.0	rack travel mm : 4.00
(1137 10003 :	Rated speed rpm : 1230
Ţ	The state of the s
(5) 0555510 05 5111507501 01100	
(B) SETTING OF INJECTION PUMP	Check
WITH GOVERNOR +	speed 1/min : + 20
+	
+	rack travel mm : 0.85
	Tolerance mm : + 0.55
GUIDE SLEEVE POSITION +	Rated speed rpm : 1400
+	
1	rack travel mm : 4.00
control lever	Rated speed rpm : 1250
position degree : -3	Tolerance 1/min : + 15
	Check
Rated speed rpm : 800	
7	speed 1/min : +- 20
Rack travel in mm: 0.50	
Tolerance mm : \leftarrow 0.20	
+	
governor spring	
pre-tension +	LOW IDLE
click setting x : 6.00	-
1	
Τ	

: 74.0 : +- 4.0
: 24.0 : + 4.0
out oumper spring
: 350 : 4.70 : + 0.10
: 350 : 5.20 : ← 0.10
: 700 : 13.85 : ← 0.05
: 1100 : 13.85 : + 0.10
: 500 : 1500 : 13.85 : + 0.05
: 500 : - : 10.70 : ← 0.20
: 500
: 500 : 300 : 11.60 : ← 0.20

Aneroid pressure					
hPa Rated speed rpm	:		1500 1100		
Del. quantity cm3/1000 strokes	•		186.	O	
Tolerance cm3/1000 strokes	:	+-	4.	0	
Check tolerance cm3/1000s.	:	+	6.	0	
Aneroid pressure	_				
hPa Rated speed rpm	:		500		
Del. quantity cm3/1000 strokes	:		114.	0	
Tolerance cm3/1000 strokes	:	+	1.	0	
Check tolerance cm3/1000s.	:	+-	4.	0	
LOW IDLE					
LOW IDLE Rated speed rpm	•		350		
Rated speed rpm Rack travel in mm Tolerance mm		+	350 5.2 0.1		
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes		+	5.2	0	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes		+	5.2 0.1	0	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.		+	5.2 0.1 20.	0 0 0	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance		+	5.2 0.1 20. 3.	o o o	
Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed		+-	5.2 0.1 20.	o o o	

FUEL DELIVERY CHARACTERISTICS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 09.09.97 : ISO 4113

Combination No. : 0 402 076 811B

Injection pump

Pump designation : PES6P120A1320/5RS338

: 0

EP type number : 0 412 026 800

Governor

Governer design. : RSV350...1100P8A664

Governer no. : 0 421 833 584

Cust. part No. : 1403477 (Version B)

Customer-spec. information

Customer : SCANIA

Motor

: DS9 93M, DSC9 47A

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration

damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C : 40 Tolerance °C : \leftarrow 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

oer values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.45 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : **+** 0.30

Check

tolerance *NW : **←** 0.75

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

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Rack travel in mm Tolerance mm	: 12.35 : +- 0.05	+ Aneroid pres + hPa + Tolerance
Tolerance cm3/1000 strokes	· ← 1.0	cm3/1000 structure check toleral cm3/1000s. Spreed
Check tolerance cm3/10000.	: 4.0	Tolerance cm3/1000 stra
Spreed	The transport of the tr	cm3/1000s.
Tolerance cm3/1000 strokes	: 8.0	CONTROL LEVE
Check tolerance cm3/1000s.	: 12.0	control leve
		tolerance de
Rated speed rpm		control leve position deg
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INWITH GOVERNOR	: ← 0.10 : 20.0 : ← 3.0 : ← 6.0 : 4.0 : 8.0 JECTION PUMP	tolerance des RATED SPEED rack travel search and speed Tolerance 1/s Check speed 1/min rack travel search and speed Tolerance 1/s Check speed 1/min rack travel search and speed Tolerance mm Rated speed
control lever position degree	: - 3	LOW IDLE
Rated speed rpm		control leve
Rack travel in mm Tolerance mm	: 0.50 : +- 0.20	position deg tolerance de
governor spring pre-tension click setting x	: 6.00	control leve position deg tolerance de Setting poin
FULL LOAD DELIVER	Y AT FULL LOAD STOP	Rated speed
Rated speed rpm	: 700	+ rack travel (+ Tolerance mm

+++++++++++++++++++++++++++++++++++++++	Aneroid pressure hPa Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1500 : +- 1.0 : +- 4.0 : 8.0 : 12.0
‡	CONTROL LEVER	
† † †	control lever position degree tolerance degree	: 59.0 : ← 4.0
+	control lever position degree tolerance degree	
	RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min Check speed 1/min	: 11.30 : 1145 : + 5 : + 10
+++++	rack travel mm Rated speed rpm Tolerance 1/min Check speed 1/min	: 4.00 : 1245 : +- 15 : +- 20
+++++	rack travel mm Tolerance mm Rated speed rpm	: 0.85 : +- 0.55 : 1350
+ + +	LOW IDLE	
Ī	control lever	

control lever
position degree : 77.0
tolerance degree : + 4.0

control lever
position degree : 27.0
tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 350 rack travel mm : 4.70 Tolerance mm : +- 0.10

Testing	T	es	t	i	na	:
---------	---	----	---	---	----	---

Rated speed rpm : 350 rack travel mm : 5.20 Tolerance mm : +- 0.10

TORQUE CONTROL

Rated speed rpm : 700 rack travel mm : 12.35 Tolerance mm : + 0.05

Rated speed rpm : 1100 rack travel mm : 12.35 Tolerance mm : +0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1500
rack travel mm : 12.35
Tolerance mm : + 0.05

Rated speed rpm : 500

Fressure hPa : rack travel mm : 10.70

Tolerance mm : +- 0.20

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 230 rack travel mm : 11.15 Tolerance mm : + 0.15

Pressure hPa : 310 rack travel mm : 11.65 Tolerance mm : \leftarrow 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1500 Rated speed rpm : 1100

Tolerance

cm3/1000 strokes : +- 4.0

Check tolerance

cm3/1000s. : +- 6.0

Aneroid pressure

hPa : - Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 114.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/10303. : + 4.6

LOW IDLE

Rated speed rpm : 350

Rack travel in mm: 5.20
Tolerance mm: + 0.10
Del. quantity

cm3/1000 strokes : 20.0 Tolerance

cm3/1000 strokes : +- 3.0 Check tolerance

Spreed Tolerance

cm3/1000s.

cm3/1000 strokes : 4.0

Check tolerance cm3/1000s.

8.0

: +- 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 09.09.97 : ISO 4113 Edition Test oil

Combination No. : 0 402 076 812A

Injection pump

Pump designation : PES6P12OA1320/5RS338

EP type number : 0 412 026 801

Governor

Governer design. : RSV350...1100P1A666

Governer no. : 0 421 833 585

Cust. part No. : 1393869

Customer-spec, information

Customer : SCANIA
Motor : DS9 92A/95M

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration

damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

bar : 251.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : - 1.0

Prestroke mm : 4.45Tolerance mm : $\leftarrow 0.05$

Check

tolerance mm : - 0.10

Rack travel in mm : 10.50

Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

	+
Rack travel in mm : 16.35 Tolerance mm : +- 0.05	Rated speed rpm : 700 Aneroid pressure
Del. quantity	hPa : 1500 Del. quantity
cm3/1000 strokes : 217.0	cm3/1000 strokes : 217.0 Tolerance
Tolerance cm3/1000 strokes : +- 1.0	cm3/1000 strokes : +- 1.0
Check tolerance	cm3/1000s. : +- 7.0 Spreed
cm3/1000s. : + 7.0	Tolerance cm3/1000 strokes : 8.0
Spreed	Check tolerance cm3/1000S. : 12.0
Tolerance cm3/1000 strokes : 8.0	
Check tolerance cm3/1000s. : 12.0	+ CONTROL LEVER
	control lever
	<pre>position degree : 34.0 tolerance degree : +- 4.0</pre>
	- toterance degree : 4.0
Rack travel in mm : 6.00	3- control lever
Tolerance mm : + 0.10 Del. quantity	position degree : 84.0 tolerance degree : +- 4.0
cm3/1000 strokes : 20.0 Tolerance	toterance degree . F 4.0
cm3/1000 strokes : +- 4.0 Check tolerance	ASSEMBLY GOVERNOR SETTING
cm3/1000s. : + 6.0	Rated speed rpm : 750
Spreed	rack travel mm : 15.30
Tolerance	-
cm3/1000 strokes : 5.0 Check tolerance	+ Rated speed rpm : 788 + Tolerance 1/min : + 4
cm3/1000s. : 9.0	tolerance 1/min : + 4 rack travel mm : 4.00
. ,	+
	rack travel mm : 0.85
(B) SETTING OF INJECTION PUMP	Tolerance mm : +~ 0.55
WITH GOVERNOR	Rated speed rpm : 850
	+
	Rated speed rpm : 751
GUIDE SLEEVE POSITION	rack travel mm : 15.30
	Rated speed rpm : 789
control lever	Tolerance 1/min : +- 4
position degree : - 3	rack travel mm : 4.00
Rated speed rpm : 800	†
Rack travel in mm : 0.50	+ rack travel mm : 0.85 + Tolerance mm : + 0.55
Tolerance mm : + 0.20	Rated speed rpm : 850
	+
governor spring	†
pre-tension click setting x : 2.25	Rated speed rpm : 752 rack travel mm : 15.30
cerek secting x : 2.23	T Tack Clavet IIIII : 13.30
	Rated speed rpm : 790
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Tolerance 1/min : +- 4

rack travel mm	: 4.00
rack travel mm	: 0.85 : +- 0.55
Tolerance mm Rated speed rpm	: +- 0.55 : 850
Nated Speed (pin	. 050
Rated speed rpm	
rack travel mm	: 15.30
Rated speed rpm	
Tolerance 1/min rack travel mm	: +- 4 : 4.00
rack travel mni Tolerance mm	: 0.85 : +- 0.55
Rated speed rpm	: 850
Rated speed rpm rack travel mm	: 754 : 15.30
rack travet mm	
Rated speed rpm Tolerance 1/min	: 792 : +- 4
rack travel mm	4.00
rack travel mm	: 0.85
Tolerance mm	: ← 0.55
Rated speed rpm	: 850
Dated speed non	; 755
Rated speed rpm rack travel mm	: 755 : 15.30
Rated speed rpm	: 793
Tolerance 1/min	: +- 4
rack travel mm	: 4.00
rack travel mm	: 0.85 : +- 0.55
Tolerance mm Rated speed rpm	: 850
·	
TORQUE CONTROL	
Rated speed rpm	: 700
rack travel mm	: 16.35
Tolerance mm	: ← 0.05
ANEROID/ALTITUDE	
COMPENSATOR TEST	
SETTING	
Rated speed rpm	: 500
Pressure hPa rack travel mm	: 1500 : 16.35
Tolerance mm	: +- 0.05

rack travel mm : 13.10	Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 12.00 : +- 0.20
Pressure hPa : 340 rack travel mm : 13.10 Tolerance mm : +- 0.20 Pressure hPa : 740 rack travel mm : 15.25 Tolerance mm : +- 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 157.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance	MEASUREMENT	
rack travel mm : 13.10 Tolerance mm : +- 0.20 Pressure hPa : 740 rack travel mm : 15.25 Tolerance mm : +- 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 157.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance	Rated speed rpm	: 500
rack travel mm : 15.25 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 157.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	Pressure hPa rack travel mm Tolerance mm	: 13.10
Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 157.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	rack travel mm	: 15.25
Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 157.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance		***************************************
cm3/1000 strokes : 157.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance	Rated speed rpm	
cm3/1000 strokes : + 1.0 Check tolerance		
		: 157.0
	Tolerance cm3/1000 strokes	
	Tolerance cm3/1000 strokes Check tolerance	: + 1.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Fdition Test oil

: 09.09.97 : ISO 4113

combination No. : 0 402 648 603A

Injection pump

Pump designation : PE8P120A720LS7427T

EP type number : 0 412 628 919

Governor

Governer design. : RQ750PA1227-1

Governer no. : 0 421 801 812

Cust. part No. : 1391888

Customer-spec. information

Customer : SCANIA

Motor

: DSI(C)14...A,M

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Vibration

damper

(RoBo diaphragm) : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde assembly : 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5

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Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

EEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.45 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm: + 1.50

Firing order : 1-2A- 7- 3A- 4

: - 5A- 6

: 0-45-90-135-180 Phasing

: -225-270-315 : ← 0.30

Tolerance

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 850

Rack travel in mm : 15.05

Tolerance mm : + 0.05

	+ guide sleeve
Del. quantity	travel mm : 11.50
cm3/1000 strokes : 271.0	Tolerance mm : +- 0.50
	+
Tolerance	
cm3/1000 strokes : +- 1.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Charles to Language	Partial arrest arr
Check tolerance : ← 8.0	+ Rated speed rpm : 850
Cili37 (UUUS, ; 0,U	+ Aneroid pressure + hPa : 1500
Spreed	Del. quantity
	- cm3/1000 strokes : 271.0
Tolerance	Tolerance
cm3/1000 strokes : 8.0	- cm3/1000 strokes : +- 1.0
	- Check tolerance
Check tolerance : 12.0	cm3/1000s. : ← 8.0
cm3/1000s. : 12.0	+ Spreed + Tolerance
	cm3/1000 strokes : 8.0
	Check tolerance
	cm3/1000s. : 12.0
Rack travel in mm : 6.50	+
Tolerance mm : + 0.10	†
Del. quantity	CONTEGULA FUED
cm3/1000 strokes : 38.0 Tolerance	+ CONTROL LEVER
cm3/1000 strokes : +- 4.0	control lever
Check tolerance	position degree : 30.0
cm3/1000s. : +- 6.0	tolerance degree : +- 4.0
Spreed	+
Tolerance	control lever
cm3/1000 strokes : 5.0	position degree : 92.0
Check tolerance cm3/1000s. : 9.0	tolerance degree : +- 4.0
CIII37 10003 9.0	
	ASSEMBLY GOVERNOR SETTING
(B) SETTING OF INJECTION PUMP	+
WITH GOVERNOR	Rated speed rpm : 900
	rack travel mm : 15.50
CHINE CLEENE TRAVEL	Rated speed rpm : 940
GUIDE SLEEVE TRAVEL	+ Tolerance 1/min : +- 4
Rated speed rpm : 759	rack travel mm : 4.00
guide sleeve	+
travel mm : 4.89	rack travel mm : 0.50
Tolerance mm : + 0.15	+ Tolerance mm : +- 0.50
Para 1	Rated speed rpm : 1000
Rated speed rpm : 480 Tolerance mm : + 0.25	†
Tolerance mm : + 0.25	Rated speed rpm : 901
Rated speed rpm : 840	rack travel mm : 15.50
Tolerance mm : +- 0.25	1
	Rated speed rpm : 941
Rated speed rpm : 797	Tolerance 1/min : + 4
guide sleeve	rack travel mm : 4.00
travel mm : 10.00	rack travel mm : 0.50
Tolerance mm : +- 0.25	Tolerance mm : 0.50
Rated speed rpm : 850	Rated speed rpm : 1000
	+

Rated speed rom	: 902	† SET
Rated speed rpm rack travel mm	: 15.50	+ Rate
Rated speed rpm	: 942	+ rac!
Tolerance 1/min		Tole
rack travel mm	: 4.00	+
mant Annual an	. 0.70	Rate
rack travel nm Tolerance mm	: 0.30 : +- 0.50	+ Pres
Rated speed rpm	: 1000	Tole
		+
	447	+ MEAS
Rated speed rpm rack travel mm	: 903 : 15.50	† n=+
rack travel mm	; 15.50	Rate
Rated speed rpm	: 943	+ Pres
Rated speed rpm Tolerance 1/min	: +- 4	racl
rack travel mm	: 4.00	+ Tole
anak tanual m	. 0.50	T
rack travel mm Tolerance mm	: +- 0.50	+ Pres
Rated speed rpm	: 1000	Tole
- Company		+
Rated speed rpm	: 904	I
Rated speed rpm rack travel mm	: 15.50	FUEL
		+
Rated speed rpm	: 944	†
Tolerance 1/min rack travel mm	: +- 4 : 4.00	+ Anei
I ack travet iiiii	. 4.00	Rate
rack travel mm	: 0.50	+ Del
Tolerance mm	: 0.50 : +- 0.50	+ cm3.
Rated speed rpm	: 1000	+ Tole
		+ cm3.
Rated speed rpm	: 905	t cm3
rack travel mm	: 15.50	1
		+
Rated speed rpm	: 945	+
Tolerance 1/min	: +- 4	+ STAI
rack travel mm	: 4.00	Rate
rack travel	: 0.50	raci
Tolerance mm	: +- 0.50	+ Tole
Rated speed rpm	: 1000	+ Del
		+ cm3
		 + Tole
TORQUE CONTROL		Che
Rated speed rpm	: 850	+ cm3.
rack travel mm	: 15.05	†
Tolerance mm	: +- 0.05	<u>†</u>
		 Ŧ
ANEROID/ALTITUDE		+
COMPENSATOR TEST		İ

		N	
			רו

SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 15.05 : +- 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 12.50 : + 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 350 : 13.20 : ← 0.20
Pressure hPa rack travel mm Tolerance mm	: 590 : 14.55 : + 0.05
	
FUEL DELIVERY CHAI	RACTERISTICS

Aneroid pressure		
hPa	:	_
Rated speed rpm	:	500
Del. quantity		
cm3/1000 strokes	:	221.0
Tolerance		
cm3/1000 strokes	: +-	- 1.0
Check tolerance		
cm3/1000s.	: +-	- 7.0

STARTING FUEL DELIVERY

Rated speed rpm	:		100
rack travel mm	:		12.50
Tolerance mm	:	+-	0.20
Del. quantity			
cm3/1000 strokes	:		180.0
Tolerance			
cm3/1000 strokes	:	+-	20.0
Check tolerance			
cm3/1000S.	:	+-	24.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 09.09.97 Test oil : 180 4113

Combination No. : 0 402 678 832B

Injection pump

Pump designation : PE8P120A720LS7189

: -10

EP type number : 0 412 628 893

Governor

Governer design. : RSV350...1050P8A652

Governer no. : 0 421 833 569

Cust. part No. : 1391881

Customer-spec. information Customer : SCANIA Motor : DS(C.I)

: DS(C,I)14...A

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Vibration damper

(RoBo diaphragm) : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

: 251.5 bar Tolerance bar : +- 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.45 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-2-7-3-4

: - 5- 6- 8

Phasing : 0-45-90 135-180

: -225-270-315

Tolerance : \leftarrow 0.30

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 13.95

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 256.0

Tolerance cm3/1000 strokes	: +- 1.0	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Check tolerance cm3/1000s.	: +- 7.0	cm3/1000s. : +- 7.0 Spreed
Spreed		Tolerance cm3/1000 strokes : 8.0 Check tolerance
Tolerance cm3/1000 strokes	: 8.0	cm3/1000s. : 12.0
Check tolerance cm3/1000s.	: 12.0	CONTROL LEVER
Rated speed rpm	: 350	control lever position degree : 57.0 tolerance degree : +- 4.0
Rack travel in mm	+	control lever
Tolerance nm	: - 5.10	position degree : 107.0
Del. quantity cm3/1000 strokes	: 21.0	tolerance degree : +- 4.0
Tolerance	+	RATED SPEED
cm3/1000 strokes	: ← 3.0	rack travel mm : 12.90
Check tolerance cm3/1000s.	: ← 6.0	Rated speed rpm : 1095 Tolerance 1/min : +- 5
Spreed	+	Check
Tolerance cm3/1000 strokes	: 4.0	speed 1/min : ← 10
Check tolerance	+	rack travel mm : 4.00
cm3/1000s.	: 8.0	Rated speed rpm : 1205 Tolerance 1/min : +- 15
(B) SETTING OF IN	IECTION PIIMP	Check speed 1/min : + 20
WITH GOVERNOR	+	
	‡	rack travel mm : 0.85 Tolerance mm : + 0.55
GUIDE SLEEVE POSI	TION	Rated speed rpm : 1305
	‡	
control lever	+	LOW TOLS
position degree Rated speed rpm	: - 3	LOW IDLE
Rack travel in mm		control lever
Tolerance mm	: ← 0.20 †	position degree : 76.0 tolerance degree : +- 4.0
governor spring	-	
pre-tension click setting x	. 4.00	control lever position degree : 26.0
Citck setting x	. 5.00	tolerance degree : +- 4.0
FULL LOAD DELIVER	Y AT FULL LOAD STOP	Setting point w/out bumper spring
Rated speed rpm	: 700	Rated speed rpm : 350
Aneroid pressure hPa	: 1500	rack travel mm : 4.10 Tolerance mm : + 0.10
Del. quantity cm3/1000 strokes	: 256.0	Testing:

Rated speed rpm rack travel mm Tolerance mm	: 350 : 4.60 : ← 0.10
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 13.95 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1050 : 13.95 : +- 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 13.95 : ← 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 10.80 : ← 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 420 : 11.40 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 630 : 12.65 : + 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1500 : 1050
cm3/1000 strokes Tolerance cm3/1000 strokes	: 234.0 : +- 4.0
Check tolerance cm3/1000s.	: + 7.0

Aneroid pressure
hPa : Rated speed rpm : 500
Del. quantity
cm3/1000 strokes : 173.0
Tolerance
cm3/1000 strokes : +- 1.0
Check tolerance
cm3/1000s. : +- 4.0

LOW IDLE

Rated speed rpm : 350

Rack tra/el in mm : 4.60
Tolerance mm : + 0.10
Del. quantity
cm3/1000 strokes : 21.0
Tolerance
cm3/1000 strokes : + 3.0
Check tolerance
cm3/1000s. : + 6.0
Spreed
Tolerance
cm3/1000 strokes : 4.0
Check tolerance
cm3/1000 strokes : 4.0
Check tolerance
cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 09.09.97 Test oil : ISO 4113

Combination No. : 0 402 678 8320

Injection pump

Pump designation : PE8P120A720LS7189

: -10

EP type number : 0 412 628 893

Governor

Governer design. : RSV350...1050P8A652

Governer no. : 0 421 833 569

Cust. part No. : 1391883

Customer-spec. information

Customer : SCANIA Motor : DS(C,I)14...A

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Vibration

damper

(RoBo diaphragm) : 3.2

Test oil inlet

temp. *C : 40 Tolerance *C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 Tolerance bar : ← 0.1

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.45 Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-2-7-3-4

: - 5- 6- 8

Phasing : 0-45-90-135-180

: -225-270-315

Tolerance : \leftarrow 0.30

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 14.45 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 271.0

Tolerance	+ Tolerance
cm3/1000 strokes : $+$ 1.0	+ cm3/1000 strokes : +- 1.0
	+ Check tolerance
Check tolerance	+ cm3/1000s. : +- 8.0
cm3/1000S. : +- 8.0	+ Spreed
Carrad	Tolerance
Spreed	- cm3/1000 strokes : 8.0
Talananua	+ Check tolerance + cm3/1000s. : 12.0
Tolerance cm3/1000 strokes : 8.0	+ CM3/10003. : 12.0
CIRCY TOOU SCHOKES . O.U	Ť
Check tolerance	
cm3/1000s. : 12.0	CONTROL LEVER
	↓ control lever
	position degree : 57.0
Rated speed rpm : 350	tolerance degree : +- 4.0
	+
Rack travel in mm : 4.60	+ control lever
Tolerance mm : +- 0.10	position degree : 107.0
Del. quantity	tolerance degree : +- 4.0
cm3/1000 strokes : 21.0	TATES COSES
Tolerance	+ RATED SPEED
cm3/1000 strokes : + 3.0	rack travel mm : 13.40
Check tolerance	Rated speed rpm : 1095 Tolerance 1/min : + 5
cm3/1000s. : + 6.0	1000, 0.100
Spreed Tolerance	+ Check + speed 1/min : + 10
cm3/1000 strokes : 4.0	T speed Minn
Check tolerance	Track travel mm : 4.00
cm3/1000s. : 8.0	Rated speed rpm : 1210
tilis/10000:	Tolerance 1/min : +- 15
	Check
(B) SETTING OF INJECTION PUMP	speed 1/min : +- 20
WITH GOVERNOR	
	rack travel mm : 0.85
	+ Tolerance mm : +- 0.55
	+ Rated speed rpm : 1360
GUIDE SLEEVE POSITION	+
	†
	†
control lever	LOUITALE
position degree : - 3	+ LOW IDLE
Rated speed rpm : 800	†
Rack travel in mm : 0.50	T control lever
Tolerance mm : + 0.20	position degree : 76.0
TO COLO IIIII TO COLO	tolerance degree : +- 4.0
governor spring	1000,000,000
pre-tension	control lever
click setting x : 6.00	position degree : 26.0
	tolerance degree : + 4.0
	+
FULL LOAD DELIVERY AT FULL LOAD STOP	Setting point w/out bumper spring
	+
Rated speed rpm : 700	Rated speed rpm : 350
Aneroid pressure	rack travel mm : 4.10
hPa : 1500	Tolerance mm : + 0.10
Del. quantity	†
cm3/1000 strokes : 271.0	† Testing:

Rated speed rpm rack travel mm Tolerance mm	: 350 : 4.60 : + 0.10
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 14.45 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1050 : 14.45 : +- 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 14.45 : + 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 10.80 : + 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 420 : 11.40 : ← 0.20
Pressure hPa rack travel mm Tolerance mm	: 630 : 12.65 : +- 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1500 : 1050 : 249.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: +- 4.0 : += 7.0

Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: : :	500 173.0 1.0 5.0

LOW IDLE			
Rated speed rpm	:		350
Rack travel in mm Tolerance mm Del. quantity	:	+-	4.60 0.10
cm3/1000 strokes Tolerance	:		21.0
cm3/1000 strokes Check tolerance	:	+-	3.0
cm3/1000s. Spreed Tolerance	:	+	6.0
cm3/1000 strokes Check tolerance	:		4.0
cm3/1000s.	:		8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : ISO 4113

: 08.09.57

Combination No. : 0 402 746 635

Injection pump

Pump designation : PES6P120A720RS7366

EP type number : 0 412 726 933

Governor

Governer design. : RQV275...1100PA1356K

Governer no. : 0 421 815 557

Cust. part No. :

Customer-spec. information

Customer : IVECO-FRANCE

Motor : 8460.41T.2036

Power KW : 185.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 076

Inlet press. bar : inlet press. bar : 2.5
Tolerance bar : + 0.1

Overflow quantity

min. l/h : 160 Tolerance l/h : + 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

bar : 208.5

Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 20.50

Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

tolerance *NW : +- 0.40

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 10.40

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes	: 202.0	Tolerance mm Rated speed rpm	: +- 0.25 : 1440
Tolerance cm3/1000 strokes	: + 1.0	guide sleeve travel mm	: 13.50 : +- 0.50
Check tolerance cm3/1000s.	: + 4.0	Tolerance mm	
Spreed			Y AT FULL LOAD STOP
Tolerance cm3/1000 strokes	: 5.0	Rated speed rpm Aneroid pressure hPa	: 1100 : 1200
Check tolerance cm3/1000s.	9.0	Del. quantity cm3/1000 strokes Tolerance	: 202.0
		cm3/1000 strokes Check tolerance	
Rated speed rpm	: 275	cm3/1000S. Spreed Tolerance	: +- 4.0
Rack travel in mm Tolerance mm	: 6.20 + : +- 0.10 +	cm3/1000 strokes Check tolerance	: 5.0
Del. quantity cm3/1000 strokes	: 19.0	cm3/1000s.	: 9.0
Talaranse cm3/1000 strokes Check tolerance	: + 3.0	CONTROL LEVER	
cm3/1000s. Spreed	: + 6.0	control lever	
Tolerance cm3/1000 strokes Check tolerance	: 8.0	position degree tolerance degree	
cm3/1000S.	: 12.0	RATED SPEED rack travel mm	: 9.40
(B) SETTING OF INJ WITH GOVERNOR	TECTION PUMP	Rated speed rpm Tolerance 1/min Check speed 1/min	: 1145 : +- 5 : +- 10
GUIDE SLEEVE TRAVE	<u> </u>	rack travel mm	
Rated speed rpm guide sleeve	+	Rated speed rpm Tolerance 1/min Check	: 1220
travel mm Tolerance mm	: 9.76 : + 0.15	speed 1/min	: +- 20
Rated speed rpm guide sleeve	: 275	rack travel mm Tolerance mm Rated speed rpm	: 0.50 : +- 0.50 : 1350
travel mm Tolerance mm	: 1.70 : + 0.20		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Rated speed rpm guide sleeve	: 791	LOW IDLE	
travel mm Tolerance mm	: 6.42 : + 0.25	control lever	
Rated speed rpm guide sleeve travel mm	: 460	position degree tolerance degree	
U. G. C. C. HRIF	1		

Setting	point	w/out	bumper	spring
---------	-------	-------	--------	--------

Rated speed rpm : 175

CRT mm min. : > 7.70

Testing:

Rated speed rpm : 275 mack travel mm : 6.20 Tolerance mm : + 0.10

Rated speed rpm : 315

TORQUE CONTROL

Rated speed rpm : 1100 rack travel mm : 10.40 Tolerance mm : + 0.05

Rated speed rpm : 800 rack travel mm : 11.30 Tolerance mm : + 0.15

Rated speed rpm : 600 rack travel mm : 11.70 Tolerance mm : + 0.10

Rated speed rpm : 300 rack travel mm : 12.50 Tolerance mm : + 0.50

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 600
Pressure hPa : 1200
rack travel mm : 11.70
Tolerance mm : +- 0.10

Rated speed rpm : 600
Pressure hPa : rack travel mm : 9.30
Tolerance mm : +- 0.20

MEASUREMENT

Rated speed rpm : 600

Pressure hPa : 280 rack travel mm : 10.10 Tolerance mm : + 0.20

Pressure hPa : 410 rack travel mm : 11.20 Tolerance mm : + 0.10

Start interlock

Rated speed rpm : > 180 Rated speed rpm : < 220

Check

speed 1/min : > 160

Check

speed 1/min : < 240

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1200 Rated speed rpm : 600

Del. quantity

cm3/1000 strokes : 216.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +- 6.0

Aneroid pressure

hPa : - 600

Del. quantity

cm3/1000 strokes : 145.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Set starting CRT at K-cam.

Rated speed rpm : 100 rack travel mm : 12.80 Tolerance mm : \div 0.50

Del. quantity

cm3/1000 strokes : 150.0

Tolerance

cm3/1000 strokes : \leftarrow 15.0

Check tolerance

cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm : 275

M₀4

Rack travel in mm Tolerance mm Del. quantity	:	+-	6.20 0.10
cm3/1000 strokes	:		19.0
Tolerance cm3/1000 strokes	:	+-	3.0
Check tolerance cm3/1000s.	:	+-	6.0
Spraed Tolerance cm3/1000 strokes	:		8.0
Check tolerance cm3/1000s.	:		12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 05.09.97 : ISO 4113

Combination No. : 0 402 796 034

Injection pump

EP type number : 0 412 726 005

Pump designation : PES6H120/320RS8

Governor

Governer design. : RE36

Governer no. : 0 421 890 355

Cust. part No. : 51.11103-7333

Customer—spec. information

Customer : MAN

Motor

: D 0826 LUH 12

Power KW

: 162.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve : 2 417 413 082

Inlet press. bar :

Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

208.5

Tolerance bar : ← 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

M06

x inside diameter : 3.0 x length mm : 600

REMARKS

Pump-specific values in Section (B)

must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : +- 1.0

: 8.00 : + 0.05 Prestroke mm Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

Tolerance : \leftarrow 0.50

Check

tolerance "NW : + 0.75

Barrel no. : 1

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V

TESTING & SETTING RACK TRAVEL SENSOR POSITION

Engine speed min-1: 0

Setting point (P, R and H pump)

Uact V 3.100 CRT mm 13.00 Tolerance mm : +/- 0.05

Check

: +/- 0.10 tolerance mm

Check value (P, R and H pump)

Uact V 1.700 6.15 CRT mm Tolerance mm : +/- 0.25 Check

: +/- 0.30 tolerance mm

Setting point (amuq M)

3,100 Uact V CRT mm 12.50 Tolerance mm : +/- 0.05 Check tolerance mm : +/- 0.10

Check value (amua M)

1.700 Uact V CRT mm 5.50 Tolerance mm : +/- 0.25 Check

: +/- 0.30 tolerance mm

Stop position

Uact V : Value with

deenergised adjusting magnet and control rod in

stop position.

0.75 CRT mm Tolerance mm : +/- 0.25

Check

: +/- 0.35 tolerance mm

ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps)

Test with control rod in stop position

Engine speed min-1: 60 Amplitude V 1.4 Tolerance V : +/- 0.6

Check

tolerance V : +/- 1.20

Engine speed min-1: 600

Difference Amplitude to

: max.1.4 Amplitude V

(C) INJECTION PUMP WITH POSITIONER

TEST POINT V1

Rated speed rpm 800 Uact V 2.510 Prestroke solenoid 13.20 Stroke mm Del. quantity cm3/1000 strokes : 222.0 Tolerance cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s.: +-4.0

Tolerance

Spreed

cm3/1000 strokes : 5.0 Check tolerance

cm3/1000S.8.0 FUEL DELIVERY CHARACTERISTICS

Rated speed rpm : 1200 Uact V 2.540 Prestroke solenoid

Stroke mm 10.30

Del. quantity cm3/1000 strokes : 209.0 Tolerance

cm3/1000 strokes : +-5.0 Check tolerance

cm3/1000s. 9.0 : +-

800 Rated speed rpm 1.400 Uact V Prestroke solenoid

Stroke mm 12.00

Del. quantity

cm3/1000 strokes : 58.0

Tolerance

cm3/1000 strokes : +- 4.0

Check tolerance cm3/1000S. Spreed	:	+	8.0)
Folerance cm3/1000 strokes	:		4.(า
Check tolerance	•			
cm3/1000s.	:		7.0)
Rated speed rpm	:		500 1.930	
Prestroke solenoid	•		1.93(J
Stroke mm	:		10.40)
Pel. quantity cm3/1000 strokes	:		145.0)
Folerance cm3/1000 strokes	•	1.	4.(n
Check tolerance	•	-	4.1	,
cm3/1000s.	•	+-	8.0	ס
TEST POINT L1				
	:		300	_
Jact V Tolerance Volt	:	_	1.440	
Chack tolerance	•	T	0.000	,
/olt		+-	0.060)
Prestroke solenoid Stroke mm			8.8	3
Del. quantity	•		0.00	,
	:		15.0	ח
Folerance cm3/1000 strokes	:	+	3.0)
Spreed				
Tolerance cm3/1000 strokes	:		8.0	า
Check tolerance	•			
cm3/1000s.	:		12.0)
STARTING FUEL DELI	VE	ERY		
Rated speed rpm	:		100	
Jact V	:		2.100)
Prestroke solenoid Stroke mm	:		7.20)
Del. quantity				
cm3/1000 strokes Tolerance	:		104.0	j
cm3/1000 strokes	:	+	6.0)
Check tolerance cm3/1000s.	•	+	10.0	า
	•			,
End of test specif	i	ati	on st	neet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition.

: 08.07.97 : ISO 4113

Test oil

Combination No. : 0 402 946 015

Injection pump

Pump designation : PES6P120A320RS8038

EP type number

: 0 412 926 025

Governor

Governer design. : RQV250...1000PA1239

Governer no.

: 0 421 814 157

Cust. part No. : 1383795

Customer-spec. information

Customer

: SCANIA

Motor

: DSC 913

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C

Tolerance °C

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 105 Tolerance l/h : +- 20.0

Test nozzle holde

assembly

: 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5

M09

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.00 Tolerance mm : + 0.05

Check

: + 0.10 tolerance mm

Rack travel in mm : 20.50

Tolerance mm : \leftarrow 0.50

Firing order

: 1-5-3-6-2-

Phasing

: 0-60-120-180-240

: -300

Tolerance

: +- 0.50

Check

tolerance *NW

: **←** 0.75

Start of delivery blocking

Tolerance

: +- 0.50

Check

tolerance *NW

: +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm Tolerance mm	: 12.90 : + 0.05	Rated speed rpm : 470 guide sleeve travel mm : 4.09
Dei. quantity cm3/1000 strokes	: 300.0	Tolerance mm : +- 0.25
Tolerance cm3/1000 strokes	; + 1.0	Rated speed rpm : 1470 guide sleeve travel mm : 11.50
Check tolerance cm3/1000s.	: + 8.0	Tolerance mm : + 0.50
Spreed		FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance cm3/1000 strokes	: 8.0	Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity
Check tolerance cm3/1000s.	: 12.0	cm3/1000 strokes : 300.0 Tolerance
		cm3/1000 strokes : +- 1.0 Check tolerance
Rated speed rpm	: 250	+ cm3/1000S. : ← 8.0 + Spreed
Rack travel in mm Tolerance mm Del. quantity	: 7.60 : + 0.10	Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
	: 40.0	12.0
cm3/1000 strokes Check tolerance	: ← 3.0	CONTROL LEVER
cm3/1000s. Spreed	: +- 6.0	control lever
Tolerance	: 4.0	position degree : 57.0 tolerance degree : + 4.0
cm3/1000s.	: 8.0	control lever position degree : 120.0 tolerance degree : +- 4.0
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	RATED SPEED
GUIDE SLEEVE TRAV	FI	rack travel mm : 11.90 Rated speed rpm : 1045 Tolerance 1/min : + 5
Rated speed rpm	: 1058	Check + speed 1/min : + 10
guide sleeve travel mm	: 7.89	rack travel mm : 4.00
Tolerance mm	: + 0.15	Rated speed rpm : 1235 Tolerance 1/min : +- 15
Rated speed rpm guide sleeve	: 250	Check + speed 1/min : +- 20
travel mm Tolerance mm	: 1.33 : + 0.20	rack travel mm : 0.50
Rated speed rpm	: 748	Tolerance mm : + 0.50 Rated speed rpm : 1350
guide sleeve travel mm Tolerance mm	: 6.17 : +- 0.25	+

		† Tolerance mm	: ← 0.15
LOW IDLE		Pressure hPa rack travel mm Tolerance mm	
position degree	. 80 0	I	
tolerance degree		Start interlock	
cotti di loc degi ce	4.0	July Court Meet tock	
control lever position degree tolerance degree		Rated speed rpm Rated speed rpm	
Setting point w/o	out bumper spring	+ Check + speed 1/min	: < 210
Rated speed rpm	: 150	Check speed 1/min	: > 130
CRT mm min.	: > 9.80	5151 251 7150 211	A.O.A.O.T.O.T.O.T.O.T.O.T.O.T.O.T.O.T.O.
Testing:		+ FUEL DELIVERY CH	ARACTERISTICS
Rated speed rpm	: 250	Aneroid pressure	
rack travel mm	: 7.60	+ hPa	: 1500
Tolerance mm	: + 0.10	+ Rated speed rpm	
		+ Del. quantity	, , , , ,
Rated speed rpm	: 300	+ cm3/1000 strokes	: 295.0
		+ Tolerance	
		+ cm3/1000 strokes	: +- 4.0
TORQUE CONTROL		+ Check tolerance	
Rated speed rpm	: 600	+ cm3/1000s.	: +- 8.0
rack travel mm	: 12.90	+	
Tolerance mm	: + 0.05	+	
		+ Aneroid pressure	
Rated speed rpm		+hPa	: -
rack travel mm		+ Rated speed rpm	: 500
Tolerance mm	: +- 0.10	+ Del. quantity	
		+ cm3/1000 strokes	: 210.0
		+ Tolerance	
ANEROID/ALTITUDE		+ cm3/1000 strokes	: ← 1.0
COMPENSATOR TEST		+ Check tolerance	
		+ cm3/1000s.	: +- 6.0
SETTING		-	
Rated speed rpm	: 500	STARTING FUEL DE	LIVERY
Pressure hPa	: 1500	+	
rack travel mm	: 12.90	+ Rated speed rpm	: 100
Tolerance mm	: 0.05	+ rack travel mm	: 20.50
		+ Tolerance mm	: +- 0.50
Rated speed rpm	: 500	+ Del. quantity	
Pressure hPa	: -	+ cm3/1000 strokes	: 265.0
rack travel mm	: 10.80	+ Tolerance	
Tolerance mm	: +- 0.20	cm3/1000 strokes	: +- 20.0
44C 4 01 15 C44C 1T		+ Check tolerance	. 2/ 0
MEASUREMENT		cm3/1000s.	: +- 24.0
Rated speed rpm	: 500	‡	
Pressure hPa	: 350	+	
rack travel mm	: 11.35	+ LOW IDLE	

M11

Rated speed rpm	:		250
Rack travel in mm Tolerance mm Del. quantity	:	+-	7.60 0.10
cm3/1000 strokes Tolerance	:		40.0
cm3/1000 strokes	:	+-	3.0
Check tolerance cm3/1000S. Spreed	:	+	6.0
Tolerance cm3/1000 strokes Check tolerance	:		4.0
cm3/1000s.	:		8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 11.08.97 Test oil : ISO 4113

Combination No. : 0 402 946 016

Injection pump

Pump designation : PES6P120A320RS8038

EP type number : 0 412 926 025

Governor

Governer design. : RQV250...1000PA1239

: -;

Governer no. : 0 421 814 158

Cust. part No. : 1369528

Customer-spec. information Customer : SCANIA Motor : DSC 912

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Overflow quantity

min. l/h : 110 Tolerance l/h : + 20.0

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

: 251.5 har Tolerance bar : +- 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.00 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 20.50 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

Tolerance : **←** 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 600

	•
Rack travel in mm : 12.70	Rated speed rpm : 470
Tolerance mm : + 0.05	+ Rated speed rpm : 470 + guide sleeve
TOTAL MAIN . TOTAL	travel mm : 4.09
Del. quantity	+ Tolerance mm : + 0.25
cm3/1000 strokes : 292.0	+
	Rated speed rpm : 1470
Tolerance	+ guide sleeve
$cm3/1000$ strokes : \leftarrow 1.0	† travel mm : 11.50
	† Tolerance mm : + 0.50
Check tolerance cm3/1000S. : +- 9.0	†
cm3/10005, : +- 9.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Spreed	T TOLL LOAD DELIVERY AT FOLL LOAD STOP
op. cca	+ Rated speed rpm : 600
Tolerance	Aneroid pressure
cm3/1000 strokes : 8.0	+ hPa : 1500
	+ Del. quantity
Check tolerance	+ cm3/1000 strokes : 292.0
cm3/1000s. : 12.0	+ Tolerance - cm3/1000 strokes : +- 1.0
	{- cm3/1000 strokes : +- 1.0
	cm3/1000s. : +- 9.0
Rated speed rpm : 250	Spreed
	+ Tolerance
Rack travel in mm : 7.60	+ cm3/1000 strokes : 8.0
Tolerance mm : +- 0.10	+ Check tolerance
Del. quantity	+ cm3/1000s. : 12.0
cm3/1000 strokes : 40.0	†
Tolerance cm3/1000 strokes : +- 3.0	<u> </u>
Check tolerance	CONTROL LEVER
cm3/1000s. : +- 6.0	CONTINUE LEVER
Spreed	control lever
Tolerance	position degree : 57.0
cm3/1000 strokes : 4.0	tolerance degree : +- 4.0
Check tolerance	†
cm3/1000s. : 8.0	t control lever
	<pre>position degree : 120.0 tolerance degree : +- 4.0</pre>
(B) SETTING OF INJECTION PUMP	toterance degree : += 4.0
WITH GOVERNOR	RATED SPEED
	rack travel mm : 11.80
	Rated speed rpm : 1045
GUIDE SLEEVE TRAVEL	+ Tolerance 1/min : +- 5
Dahad aread area	+ Check
Rated speed rpm : 1057	+ speed 1/min : ← 10
guide sleeve travel mm : 7.89	rack travel mm : 4.00
Tolerance mm : + 0.15	Rated speed rpm : 1235
7000.01.00	+ Tolerance 1/min : + 15
Rated speed rpm : 250	+ Check
guide sleeve	+ speed 1/min : +~ 20
travel mm : 1.33	†
Tolerance mm : ← 0.20	+ rack travel mm : 0.50
Rated speed rpm : 748	+ Tolerance mm : +- 0.50 + Rated speed rpm : 1350
Rated speed rpm : 748 guide sleeve	T hated speed thiii : (3)0
travel mm : 6.17	+
Tolerance mm : +- 0.25	+
	·

LOW IDLE	
control lever position degree	: 89.0
tolerance degree	: +- 4.0
control lever	
position degree tolerance degree	: 25.0
tolerance degree	: +- 4.0
Setting point w/o	ut bumper spring
Rated speed rpm	: 150
CRT mm min.	; > 9.70
Testing:	
Rated speed rpm	: 250
rack travel nm	: 7.60
Tolerance mm	: ← 0.10
Rated speed rpm	: 300
TORQUE CONTROL	
Rated speed rpm	: 600
rack travel mm	: 12.70
Tolerance mm	: +- 0.05
Rated speed rpm	: 1000
rack travel mm	: 12.70 : +- 0.10
Tolerance mm	; +- 0. 10
ANEROID/ALTITUDE COMPENSATOR TEST	
COMPENSATOR TEST	
SETTING	
Rated speed rpm	: 500
Pressure hPa	: 1500 : 12.70
rack travel mm Tolerance mm	: +- 0.05

Rated speed rpm Pressure hPa	: 500 : -
rack travel mm	10.80
Tolerance mm	: + 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa	: 250
rack travel mm	: 11.30

Tolerance mm	: +- 0.15	
Pressure hPa	: 620	
rack travel mm	: 12.30	
Tolerance mm	: +- 0.05	
Start interlock		
Rated speed rpm	: > 150	
Rated speed rpm	: < 190	
Check speed 1/min	: > 130	
Check	. , , , , , ,	
speed 1/min	: < 210	
FUEL DELIVERY CHA	RACTERISTICS	
Aneroid pressure		
hPa	: 1500	
Rated speed rpm	: 1000	
Del. quantity cm3/1000 strokes	: 288.0	
Tolerance	. 200.0	
cm3/1000 strokes	: + 4.0	
Check tolerance		
cm3/1000s.	: ← 9.0	
Aneroid pressure		
hPa Rated speed rpm	: 500	
Del. quantity	. 500	
cm3/1000 strokes	: 210.0	
Tolerance	10	
cm3/1000 strokes Check tolerance	: ← 1.0	
cm3/1000S.	: +- 6.0	
	·	
STARTING FUEL DEL	IVERY	
Rated speed rpm	: 100	
rack travel mm	: 20.50	
Tolerance mm	: ← 0.50	
Del. quantity	: 260.0	
cm3/1000 strokes Tolerance	: 260.0	
cm3/1000 strokes	: 20.0	
Check tolerance	. 2. 2	
cm3/1000s.	: +- 24.0	
LOW IDLE		
		

M15

Rated speed rpm	:		250
Rack travel in mm Tolerance mm Del. quantity	:	+-	7.60 0.10
cm3/1000 strokes	:		40.0
cm3/1000 strokes	:	+-	3.0
Check tolerance cm3/1000S. Spreed	:	+-	6.0
Tolerance cm3/1000 strokes Check tolerance	:		4.0
cm3/1000s.	:		8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 11.08.97 Test oil : ISO 4113

Combination No. : 0 402 946 020

Injection pump

Pump designation : PES6P120A320RS8038

EP type number : 0 412 926 025

Governor

Governer design. : RQV250...1000PA1239

: -2

Governer no.

: 0 421 814 168

Cust. part No. : 1369545

Customer-spec, information Customer : SCANIA

Motor

: DSC 9.11

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C

40

Tolerance °C : +- 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 115 Tolerance l/h : ← 10.0

Test nozzle holde

assembly

: 1 688 901 104

Opening pressure

: 251.5

Tolerance bar : +- 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.00 Tolerance mm : + 0.05

Check

: ← 0.10 tolerance mm

Rack travel in mm : 20.50 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

Tolerance

: ← 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 600

bar

	1
Rack travel in mm : 12.30 Tolerance mm : +- 0.05	Rated speed rpm : 470 guide sleeve
Del. quantity	travel mm : 4.09 Tolerance mm : +- 0.25
cm3/1000 strokes : 277.0	Rated speed rpm : 1470
Tolerance cm3/1000 strokes : + 1.0	guide sleeve travel mm : 11.50
Check tolerance cm3/1000s. : + 9.0	Tolerance mm : + 0.50
Spreed	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance	Rated speed rpm : 600 Aneroid pressure
cm3/1000 strokes : 8.0	hPa : 1500 Del. quantity
Check tolerance cm3/1000s. 12.0	cm3/1000 strokes : 277.0
	cm3/1000 strokes : + 1.0
252	+ cm3/1000s. : $+$ 9.0
Rated speed rpm : 250	+ Spreed + Tolerance
Rack travel in mm : 7.70	+ cm3/1000 strokes : 8.0
Toterance mm : + 0.10	+ Check tolerance
Del. quantity	+ cm3/1000s. : 12.0
cm3/1000 strokes : 40.0	+
Tolerance cm3/1000 scrokes : +- 3.0	†
cm3/1000 scrokes : +- 3.0 Check tolerance	CONTROL LEVER
cm3/1000s. : +- 6.0	I CONTROL EEVER
Spreed	control lever
Tolerance	position degree : 56.0
cm3/1000 strokes : 4.0	tolerance degree : + 4.0
Check tolerance	+
cm3/1000s. : 8.0	+ control lever
	position degree : 119.0
(B) SETTING OF INJECTION PUMP	tolerance degree : +- 4.0
WITH GOVERNOR	T RATED SPEED
	rack travel mm : 11.30
	Rated speed rpm : 1045
GUIDE SLEEVE TRAVEL	+ Tolerance 1/min : + 5
Dated aread are 4057	+ Check
Rated speed rpm : 1057	+ speed 1/min : + 10
guide sleeve travel mm : 7.89	rack travel mm : 4.00
Tolerance mm : + 0.15	Rated speed rpm : 1225
	+ Tolerance 1/min : +- 15
Rated speed rpm : 250	Check
guide sleeve	+ speed 1/min : +- 20
travel mm : 1.33	0.50
Tolerance mm : +- 0.20	+ rack travel mm : 0.50 + Tolerance mm : + 0.50
Rated speed rpm : 748	+ Tolerance mm : + 0.50 + Rated speed rpm : 1350
guide sleeve	+
travel mm : 6.17	†
Tolerance mm : + 0.25	+

LOW IDLE	
control lever position degree tolerance degree	: 89.0 : +- 4.0
control lever position degree tolerance degree	: 24.0 : + 4.0
Setting point w/o	out bumper spring
Rated speed rpm	: 150
CRT mm min.	: > 9.80
Testing:	
Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm	: 300
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 600 : 12.30 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 12.30 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 12.30 : ← 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 10.80 : + 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm	: 330 : 11.20

Tolerance mm	: +- 0.15	
Pressure hPa	: 600	
rack travel mm	: 11.90	
Tolerance mm	: ← 0.05	
		
Start interlock		
Rated speed rpm	: < 190	
Rated speed rpm	: > 150	
Check speed 1/min	: < 210	
Check	. \ 210	
speed 1/min	: > 130	
FUEL DELIVERY CHA	RACTERISTICS	
. Jee Affikevi fliu		
A		
Aneroid pressure hPa	: 1500	
Rated speed rpm	: 1000	
Del. quantity		
cm3/1000 strokes	: 278.0	
Tolerance cm3/1000 strokes	: +- 4.0	
Check tolerance	. +- 4.0	
cm3/1000s.	: ← 9.0	
Aneroid pressure		
hPa	: -	
Rated speed rpm	: 500	
Del. quantity	240.0	
cm3/1000 strokes Tolerance	: 210.0	
cm3/1000 strokes	: + 1.0	
Check tolerance		
cm3/1000s.	: 7.0	
STARTING FUEL DEL	.IVERY	
Rated speed rpm	: 100	
rack travel mm	: 20.50	
Tolerance mm	: +- 0.50	
Del. quantity	2/2/2	
cm3/1000 strokes	: 260.0	
Tolerance cm3/1000 strokes	: +- 20.0	
Check tolerance		
cm3/1000s.	: ← 24.0	
IOW IDE		

LOW IDLE

Rated speed rpm	:		250
Rack travel in mm	:		7.70
Tolerance mm	:	+-	0.10
Del. quantity			
cm3/1000 strokes	:		40.0
Tolerance			
cm3/1000 strokes	:	+-	3.0
Check tolerance			
cm3/1000s.	:	+	6.0
Spreed			
Tolerance			
cm3/1000 strokes	:		4.0
Check tolerance			
cm3/1000s.	:		8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 11.08.97 Test oil : ISO 4113

Combination No. : 0 402 946 021

Injection pump

Pump designation : PES6P120A320RS8038

EP type number : 0 412 926 025

Governor

Governer design. : RQ250/1000PA1265 Governer no. : 0 421 801 800

Cust. part No. : 1380278

Customer-spec. information Customer : SCANIA

Motor

: DSC 9.12

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. *C : 40
Tolerance *C : + 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Overflow quantity

min. L/h : 110
Tolerance L/h : +- 20.0

Test nozzle holde

assembly

: 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5

M21

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.00Tolerance mm : $\leftarrow 0.05$

Check

: +- 0.10 tolerance mm

Rack travel in mm : 20.50 Tolerance mm : +- 0.20

Firing order : 1-5- 3- 6- 2-

: 4

Phasing : 0-60-120-180-240

: -300

: **←** 0.50 Tolerance

Check

tolerance °NW : +- 0.75

Start of delivery blocking

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 600

	1
Rack travel in mm : 12.70	Rated speed rpm : 364
Tolerance mm : +- 0.05	guide sleeve
1000141100 11111	+ travel mm : 3.50
Del. quantity	+ Tolerance mm : +- 0.10
cm3/1000 strokes : 292.0	T roter dice limit
CIIDA 1000 251 0KE2 . EXC.O	Rated speed rpm : 490
Tolerance	
	- guide sleeve
cm3/1000 strokes : + 1.0	travel mm : 4.50
	Tolerance mm : +- 0.10
Check tolerance	†
$cm3/1000s$. : \leftarrow 9.0	+ Rated speed rpm : 1146
	† guide sleeve
Spreed	travel mm : 5.50
	+ Tolerance mm : +- 0.10
Tolerance	+
cm3/10 0 0 strokes : 8.0	+ Rated speed rpm : 1610
	† guide sleeve
Check tolerance	† travel mm : 11.50
cm3/1000s. : 12.0	+ Tolerance mm : + 0.50
	+
No dia _{Mars} pilanggalan dia dia dia dia dia dia dia dia dia dia	<u> </u>
	→ GUIDE SLEEVE POSITION
Rated speed rpm : 250	1
the state of the s	1
Rack travel in mm: 7.60	control lever
Tolerance mm : + 0.10	position degree : 109
Del. quantity	Rated speed rpm : 600
cm3/1000 strokes : 40.0	1 Nated speed 1pm : 000
Tolerance	Rack travel in mm : 16.40
cm3/1000 strokes : +- 3.0	Tolerance mm : + 0.89
	Total dive likii
Check tolerance	Total and and and and and and and and and and
Check tolerance cm3/1000s. : +- 6.0	
Check tolerance cm3/1000s. : +- 6.0 Spreed	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 4.0	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600
Check tolerance cm3/1000s. : ← 6.0 spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure
Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 4.0	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500
Check tolerance cm3/1000s. : ← 6.0 spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity
Check tolerance cm3/1000s. : +- 6.0 spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0
Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance
Check tolerance cm3/1000s. : +- 6.0 spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : +- 1.0
Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance
Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 9.0
Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 9.0 Spreed
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 9.0 Spreed Tolerance
Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 9.0 Spreed Tolerance cm3/1000 strokes : 8.0
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 9.0 Spreed Tolerance
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1073 guide sleeve travel mm : 4.82	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 9.0 Spreed Tolerance cm3/1000 strokes : 8.0
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1073 guide sleeve	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 9.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1073 guide sleeve travel mm : 4.82	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 9.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1073 guide sleeve travel mm : 4.82 Tolerance mm : + 0.15	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 9.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1073 guide sleeve travel mm : 4.82 Tolerance mm : + 0.15 Rated speed rpm : 250	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 9.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1073 guide sleeve travel mm : 4.82 Tolerance mm : 4.82 Tolerance mm : 250 guide sleeve	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 9.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1073 guide sleeve travel mm : 4.82 Tolerance mm : 4.82 Tolerance mm : 250 guide sleeve travel mm : 250 guide sleeve travel mm : 1.33	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 9.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1073 guide sleeve travel mm : 4.82 Tolerance mm : 4.82 Tolerance mm : 250 guide sleeve travel mm : 250 guide sleeve travel mm : 1.33	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 9.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1073 guide sleeve travel mm : 4.82 Tolerance mm : 4.82 Tolerance mm : 250 guide sleeve travel mm : 250 guide sleeve travel mm : 1.33 Tolerance mm : + 0.20	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 9.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 CONTROL LEVER control lever position degree : 47.0
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1073 guide sleeve travel mm : 4.82 Tolerance mm : 4.82 Tolerance mm : 250 guide sleeve travel mm : 250 guide sleeve travel mm : 1.33 Tolerance mm : + 0.20 Rated speed rpm : 990	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 9.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1073 guide sleeve travel mm : 4.82 Tolerance mm : 4.82 Tolerance mm : 250 guide sleeve travel mm : 1.33 Tolerance mm : + 0.20 Rated speed rpm : 990 guide sleeve	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000strokes : +- 1.0 Check tolerance cm3/1000s. : +- 9.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 CONTROL LEVER control lever position degree : 47.0 tolerance degree : +- 4.0
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1073 guide sleeve travel mm : 4.82 Tolerance mm : 4.82 Tolerance mm : 250 guide sleeve travel mm : 250 guide sleeve travel mm : 1.33 Tolerance mm : + 0.20 Rated speed rpm : 990	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 9.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 CONTROL LEVER control lever position degree : 47.0

tolerance degree : +- 4.0	+
RATED SPEED rack travel mm : 11.70 Rated speed rpm : 1045 Tolerance 1/min : +- 5 Check speed 1/min : +- 10	ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500
rack travel mm : 4.00 Rated speed rpm : 1235 Tolerance 1/min : + 15 Check speed 1/min : + 20 rack travel mm : 0.50 Tolerance mm : + 0.50	Pressure hPa : 1500 rack travel mm : 12.70 Tolerance mm : + 0.05 Rated speed rpm : 500 Pressure hPa : - rack travel mm : 10.80 Tolerance mm : + 0.20
Rated speed rpm : 1350	MEASUREMENT Rated speed rpm : 500
LOW IDLE	Pressure hPa : 250 rack travel mm : 11.30 Tolerance mm : +- 0.15
control lever position degree : 87.0 tolerance degree : + 4.0	Pressure hPa : 620 rack travel mm : 12.30 Tolerance mm : + 0.05
control lever position degree : 25.0 tolerance degree : +- 4.0	Start interlock
Setting point w/out bumper spring Rated speed rpm : 150	Rated speed rpm : > 150 Rated speed rpm : < 190
CRT mm min. : > 9.50 Testing:	Check speed 1/min : > 130 Check speed 1/min : < 210
Rated speed rpm : 250 rack travel mm : 7.60 Tolerance mm : ← 0.10	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm : 355 rack travel mm : 2.00	Aneroid pressure hPa : 1500 Rated speed rpm : 1000 Del. quantity
TORQUE CONTROL Rated speed rpm : 600 rack travel mm : 12.70 Tolerance mm : ← 0.05	cm3/1000 strokes : 288.0 Tolerance cm3/1000 strokes : +- 4.0 Check tolerance cm3/1000s. : +- 9.0
Rated speed rpm : 1000 rack travel mm : 12.70 Tolerance mm : + 0.10	

Del. quantity

cm3/1000 strokes : 210.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : + 6.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : +- 0.50

Del, quantity

cm3/1000 strokes : 270.0

Tolerance

cm3/1000 strokes : \leftarrow 20.0

Check tolerance

cm3/1000s. : \leftarrow 24.0

LOW IDLE

Rated speed rpm : 250

Rack travel in mm : 7.60 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 40.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +- 6.0

Spreed

Tolerance

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 11,08,97 : ISO 4113

Combination No.

: 0 402 946 022

Injection pump

Pump designation : PES6P120A320RS8038 EP type number : 0 412 926 025

Governor

Governer design. : RQ250/1000PA1265-1

Governer no. : 0 421 801 801

Cust. part No. : 1380280

Customer-spec. information Customer : SCANIA

Motor : DSC 9.11

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C Tolerance *C

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 110 Tolerance l/h : +- 20.0

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

bar : 251.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Telerance bar : +- 1.0

Prestroke mm : 4.00 Tolerance mm : **←** 0.05

Check

tolerance mm : +− 0.10

Rack travel in mm : 20.50 Tolerance mm : \leftarrow 0.20

Firing order : 1-5- 3- 6- 2-

: 4

: 0-60-120-180-240 Phasing

: -300

: +- 0.50 Tolerance

Check

tolerance *NW : +- 0.75

Start of delivery blocking

Tolerance : + 0.50

Chack

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 600

	1.
Rack travel in mm: 12.30	Rated speed rpm : 364
Tolerance mm : + 0.05	guide steeve
. 5.55	travel mm : 3.50
Del. quantity	+ Tolerance mm : +- 0.10
cm3/1000 strokes : 277.0	+
	Rated speed rpm : 490
Tolerance	+ guide sleeve
cm3/100C strokes : +- 1.0	+ travel mm : 4.50
	+ Tolerance mm : + 0.10
Check tolerance	+
$cm3/1000s$. : \leftarrow 8.0	Rated speed rpm : 1146
	+ guide sleeve
Spreed	+ travel mm : 5.50
	+ Tolerance mm : ← 0.10
Tolerance	+
cm3/1000 strokes : 8.0	+ Rated speed rpm : 1610
	† guide sleeve
Check tolerance	+ travel mm : 11.50
cm3/1000s. : 12.0	+ Tolerance mm : +- 0.50
	t
Date of parameters and 250	GUIDE SLEEVE POSITION
Rated speed rpm : 250	†
Rack travel in mm : 7.70	t combact loves
	t control lever
Tolerance mm : +- 0.10 Del. quantity	+ position degree : 109 + Rated speed rpm : 600
cm3/1000 strokes : 45.0	+ Rated speed rpm : 600
Tolerance	Rack travel in mm: 16.40
	+ Tolerance mm : +- 0.80
	1 Total di Italian . 1 0.00
Check tolerance	- Total de list
Check tolerance cm3/1000s. : ← 6.0	+
Check tolerance cm3/1000S. : ← 6.0 Spreed	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000S. : ← 6.0 Spreed Tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity
Check tolerance cm3/1000s. : ← 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : +- 1.0
Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 8.0
Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 8.0 Spreed
Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP W'TH GOVERNOR GUIDE SLEEVE TRAVEL	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000S. : +- 8.0 Spreed Tolerance
Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP W'TH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1073	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000S. : +- 8.0 Spreed Tolerance cm3/1000 strokes : 8.0
Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP W'TH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1073 guide sleeve	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 8.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (8) SETTING OF INJECTION PUMP W'TH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1073 guide sleeve travel mm : 4.82	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000S. : +- 8.0 Spreed Tolerance cm3/1000 strokes : 8.0
Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP W'TH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1073 guide sleeve	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 8.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP W'TH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1073 guide sleeve travel mm : 4.82 Tolerance mm : + 0.15	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 8.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP W'TH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1073 guide sleeve travel mm : 4.82 Tolerance mm : + 0.15 Rated speed rpm : 250	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 8.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP W'TH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1073 guide sleeve travel mm : 4.82 Tolerance mm : + 0.15 Rated speed rpm : 250 guide sleeve	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 8.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP W'TH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1073 guide sleeve travel mm : 4.82 Tolerance mm : 4.82 Tolerance mm : 250 guide sleeve travel mm : 250 guide sleeve travel mm : 1.33	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000S. : +- 8.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000S. : 12.0
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP W'TH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1073 guide sleeve travel mm : 4.82 Tolerance mm : + 0.15 Rated speed rpm : 250 guide sleeve	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000S. : +- 8.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 CONTROL LEVER control lever
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP W'TH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1073 guide sleeve travel mm : 4.82 Tolerance mm : 4.82 Tolerance mm : 250 guide sleeve travel mm : 1.33 Tolerance mm : + 0.20	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000S. : +- 8.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 CONTROL LEVER control lever position degree : 38.0
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (8) SETTING OF INJECTION PUMP W'TH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1073 guide sleeve travel mm : 4.82 Tolerance mm : + 0.15 Rated speed rpm : 250 guide sleeve travel mm : 1.33 Tolerance mm : + 0.20 Rated speed rpm : 990	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000S. : +- 8.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 CONTROL LEVER control lever
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (8) SETTING OF INJECTION PUMP W'TH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1073 guide sleeve travel mm : 4.82 Tolerance mm : + 0.15 Rated speed rpm : 250 guide sleeve travel mm : 1.33 Tolerance mm : + 0.20 Rated speed rpm : 990 guide sleeve	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 8.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 CONTROL LEVER control lever position degree : 38.0 tolerance degree : +- 4.0
Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0 (8) SETTING OF INJECTION PUMP W'TH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1073 guide sleeve travel mm : 4.82 Tolerance mm : + 0.15 Rated speed rpm : 250 guide sleeve travel mm : 1.33 Tolerance mm : + 0.20 Rated speed rpm : 990	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000S. : +- 8.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 CONTROL LEVER control lever position degree : 38.0

tolerance degree : +- 4.0	†
RATED SPEED rack travel mm : 11.30 Rated speed rpm : 1045 Tolerance 1/min : +- 5 Check speed 1/min : +- 10	ANEROID/ALTITUDE COMPENSATOR TEST SETTING
rack travel mm : 4.00 Rated speed rpm : 1225 Tolerance 1/min : + 15 Check speed 1/min : + 20 rack travel mm : 0.50 Tolerance mm : + 0.50	Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 12.30 Tolerance mm : + 0.05 Rated speed rpm : 500 Pressure hPa : - rack travel mm : 10.80 Tolerance mm : + 0.20
Rated speed rpm : 1350	MEASUREMENT Rated speed rpm : 500
LOW IDLE	Pressure hPa : 330 rack travel mm : 11.20 Tolerance mm : 0.15
control lever position degree : 87.0 tolerance degree : +- 4.0 control lever	Pressure hPa : 600 rack travel mm: : 11.90 Tolerance mm : +- 0.05
position degree : 25.0 tolerance degree : +- 4.0	Start interlock
Setting point w/out bumper spring Rated speed rpm : 150	Rated speed rpm : < 190 Rated speed rpm : > 150
CRT mm min. : > 9.50	Check speed 1/min : < 210 Check
Testing: Rated speed rpm : 250	speed 1/min : > 130
rack travel mm : 7.70 Tolerance mm : ← 0.10	FUEL DELIVERY CHARACTERISTICS
rack travel mm : 2.00 Rated speed rpm : 355 Tolerance 1/min : +- 20	Aneroid pressure hPa : 1500 Rated speed rpm : 1000 Del. quantity
TORQUE CONTROL Rated speed rpm : 600 rack travel mm : 12.30 Tolerance mm : + 0.05	- cm3/1000 strokes : 278.0 - Tolerance - cm3/1000 strokes : + 4.0 - Check tolerance - cm3/1000s. : + 8.0
Rated speed rpm : 1000 rack travel mm : 12.30 Tolerance mm : +- 0.10	Aneroid pressure hPa : - Rated speed rpm : 500

Del. quantity
cm3/1000 strokes : 210.0
Tolerance
cm3/1000 strokes : +- 1.0
Check tolerance
cm3/1000s. : +- 6.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : + 0.50
Del. quantity
cm3/1000 strokes : 270.0
Tolerance
cm3/1000 strokes : + 20.0
Check tolerance
cm3/1000S. : + 24.0

LOW IDLE

Rated speed rpm : 250 Rack travel in mm : 7.70 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 45.0 Tolerance cm3/1000 strokes : \leftarrow 3.0 Check tolerance cm3/1000s. : +-6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 11.08.97 : ISO 4113

Combination No. : 0 402 946 023

Injection pump

Pump designation : PES6P120A320RS3038

EP type number : 0 412 926 025

Governor

Governer design. : RQ250/1000PA1265-2

Governer no. : 0 421 801 808

Cust. part No. : 1385102

Customer-spec. information

Customer : SCANIA

Motor

: DSC 9.15

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C

: 40

Tolerance °C

: + 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 110 Tolerance l/h : + 20.0

Test nozzle holde

assembly

: 1 688 901 104

Opening pressure

bar

: 251.5

Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.00 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 20.50

Tolerance mm : +- 0.20

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance *NW : +- 0.75

Start of delivery blocking

Tolerance : \leftarrow 0.30

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 600

NO1

Daal Assess & San	13.00	7/0
Rack travel in mm		Rated speed rpm : 360
Tolerance mm	: +- 0.05	guide sleeve
A. 1		+ travel mm : 3.50
Del. quantity	700.0	Tolerance mm : + 0.10
cm3/1000 strokes	: 300.0	†
		+ Rated speed rpm : 490
Tolerance		+ guide sleeve
cm3/1000 strokes	: +- 1.0	travel mm : 4.50 Tolerance mm : + 0.10
		† Tolerance mm : + 0.10
Check tolerance		†
cm3/1000s.	: +- 9.0	Rated speed rpm : 1134
		+ guide sleeve
Spreed		travel mm : 5.50
		Tolerance mm : +- 0.10
Tolerance		+
cm3/1000 strokes	: 8.0	+ Rated speed rpm : 1600
		† guide sleeve
Check tolerance		+ travel mm : 11.50
cm3/1000s.	: 12.0	+ Tolerance mm : + 0.50
		+
		GUIDE SLEEVE POSITION
Rated speed rpm	: 250	+
,		+
Rack travel in mo	n: 7.60	+ control lever
Tolerance mm	: +- 0.10	position degree : 109
Del. quantity		+ Rated speed rpm : 600
cm3/1000 strokes	: 40.0	+
Tolerance		Rack travel in mm: 16.40
cm3/1000 strokes	: +- 3.0	+ Tolerance mm : +- 0.80
Check tolerance		
cm3/1000S.	: +- 6.0	
Spreed		FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance		-
cm3/1000 strokes	: 4.0	Rated speed rpm : 600
Check tolerance		+ Aneroid pressure
cm3/1000s.	: 8.0	+ hPa : 1500
· · · · · · · · · · · · · · · · · · ·	. 3.3	Del. quantity
		cm3/1000 strokes : 300.0
(B) SETTING OF IN	JUECTION PUMP	+ Tolerance
WITH GOVERNOR	10 CU 1 2017 1 UI II	- cm3/1000 strokes : + 1.0
WATER GOVERNOON		- Check tolerance
		- cm3/1000s. : +- 9.0
GUIDE SLEEVE TRAN	/FI	Spreed
AATAC ACCEAC IIIVI		+ Tolerance
Rated speed rpm	: 1060	cm3/1000 strokes : 8.0
guide sleeve	. 1000	Check tolerance
travel mm	: 4.82	- cm3/1000s. : 12.0
Tolerance mm	: + 0.15	
TOTAL ALICE IIII	. • 0.15	1
Dated speed nom	: 250	1
Rated speed rpm	. 250	CONTROL LEVER
guide sleeve travel mm	: 1.44	I CONTROL LEVER
Tolerance mm	: + 0.20	control lever
roterante mm	. +- 0.20	
Datad annod	: 970	
Rated speed rpm	: 970	tolerance degree : +- 4.0
guide sleeve	. / 50	T control loves
travel mm	: 4.50	+ control lever
Tolerance mm	: + 0.10	+ position degree : 108.0

tolerance degree	: ← 4.0 †	-
RATED SPEED rack travel mm Rated speed rpm		- ANEROID/ALTITUDE - COMPENSATOR TEST
Tolerance 1/min Check speed 1/min	: +- 10	- SETTING
rack travel mm Rated speed rpm Tolerance 1/min Check	: +- 15	- Rated speed rpm : 500 - Pressure hPa : 1500 - rack travel mm : 12.90 - Tolerance mm : +- 0.05
speed 1/min rack travel mm Tolerance mm	: ← 20 : 0.50 : ← 0.50	- Rated speed rpm : 500 - Pressure hPa : - - rack travel mm : 9.80 - Tolerance mm : +- 0.20
Rated speed rpm	: 1350	- MEASUREMENT
		- Rated speed rpm : 500
LOW IDLE		- Pressure hPa : 430 - rack travel mm : 10.90 - Tolerance m/m : + 0.15
control lever position degree tolerance degree		- - Pressure hPa : 830 - rack travel mm : 12.00 - Tolerance mm : + 0.05
control lever position degree tolerance degree		- Start interlock
Setting point w/o	out bumper spring	- - Rated speed rpm : < 190 - Rated speed rpm : > 150
Rated speed rpm	: 150	- Check
CRT mm min.	: > 9.50	- speed 1/min : < 210 - Check
Testing:		- speed 1/min : > 130
Rated speed rpm rack travel mm Tolerance mm	: 7.60 	FUEL DELIVERY CHARACTERISTICS
rack travel mm Rated speed rpm Tolerance 1/min	: 355	- Aneroid pressure - hPa : 1500 - Rated speed rpm : 1000 - Del. quantity
TORQUE CONTROL Rated speed rpm	: 600	- cm3/1000 strokes : 295.0 - Tolerance - cm3/1000 strokes : +- 4.0
rack travel mm Tolerance mm	: 12.90	- Check tolerance - cm3/1000s. : +- 9.0
Rated speed rpm rack travel mm Tolerance mm	: 12.90	Aneroid pressure hPa : - Rated speed rpm : 500

Del. quantity		
cm3/1000 strokes	:	172.0
Tolerance		
cm3/1000 strokes	; +-	- 1.0
Check tolerance		
cm3/1000s.	: +-	- 6.0

STARTING FUEL DELIVERY

Rated speed rpm	: 100
rack travel mm	: 20.50
Tolerance mm	: ← 0.50
Del. quantity	
cm3/1000 strokes	: 265.0
Tolerance	
cm3/1000 strokes	: ← 20.0
Check tolerance	
cm3/1000s.	: +- 24.0

LOW IDLE

Rated speed rpm	:	250	
Rack travel in mm Tolerance mm	: +	7.60 0.10	
Del. quantity cm3/1000 strokes Tolerance	:	40.0	
cm3/1000 strokes Check tolerance	: +-	3.0	
cm3/1000s. Spreed	: +-	6.0	
Tolerance cm3/1000 strokes	:	4.0	
Check tolerance cm3/1000s.	:	8.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 09.09.97 : ISO 4113

Combination No. : 0 402 946 024A

Injection pump

Pump designation : PES6P12GA72CRS8045

EP type number : 0 412 926 028

Governor

Governer design. : RQ750PA1299

Governer no. : 0 421 801 810

Cust. part No. : 1388643

Customer-spec. information Customer : SCANIA

Motor

: DSC1158A

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Overflow quantity

min. L/h : 90 Tolerance t/h : + 20.0

Test nozzle holde

assembly

: 1 688 901 104

Opening pressure bar : 251.5 Tolerance bar : ± 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : \leftarrow 1.0

: 3.65 : + 0.05 Prestroke mm

Tolerance mm

Check

tolerance mm

: **←** 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance °NW : + 0.75

Start of delivery blocking

Tolerance : +- 0.10

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm	: 850	† Tolerance mm : +- 0.25	
	47 70	Rated speed rpm : 953	
Rack travel in m		+ guide sleeve	
Tolerance mm	: +- 0.05	travel mm : 10.00	
Del. quantity			
cm3/1000 strokes	· 338 n	Rated speed rpm : 1010	
	. 555.6	guide sleeve	
Tolerance		+ travel mm : 11.50	
cm3/1000 strokes	: +- 1.0	† Tolerance mm : +- 0.50	
		+	
Check tolerance			
c m 3/1000s.	: +- 10.0	+ FULL LOAD DELIVERY AT FULL LOA	AD STOP
Spreed		† Rated speed rpm : 850	
opi ced		Aneroid pressure	
Tolerance		hPa : 1500	
cm3/1000 strokes	: 8.0	+ Del. quantity	
		+ cm3/1000 strokes : 338.0	
Check talerance		† Tolerance	
cm3/1000S.	: 12.0	+ cm3/1000 strokes : +- 1.0	
		T Cilis 70003:	
		+ Tolerance	
Rack travel in m	ກ: 3.3ບ	+ cm3/1000 strokes : 8.0	
Tolerance mm	: + 0.20	† Check tolerance	
Del. quantity		+ cm3/1000s. : 12.0	
cm3/1000 strokes	: 30.0	†	
Tolerance cm3/1000 strokes	. + / 1	†	
Check tolerance	4.0	CONTROL LEVER	
cm3/1000s.	: +- 6.0	+	
Spreed		+ control lever	
Tolerance	. -	+ position degree : 29.0	
cm3/1000 strokes	: 5.0	tolerance degree : +- 4.0	
Check tolerance cm3/1000S.	: 9.0	control lever	
CMD/ 10003.	. 7.0	position degree : 90.0	
		tolerance degree : + 4.0	
(B) SETTING OF IN	NJECTION PUMP	+	
WITH GOVERNOR		†	
		ASSEMBLY GOVERNOR SETTING	
GUIDE SLEEVE TRAN	/FI	Rated speed rpm : 900	
GOIVE OCCURE THAT	,	rack travel mm : 12.70	
Rated speed rpm	: 907	+	
guide sleeve		+ Rated speed rpm : 936	
travel mm	: 5.23	+ Tolerance 1/min : + 4	
Tolerance mm	: +- 0.15	rack travel mm : 4.00	
Rated speed rpm	: 590	rack travel mm : 0.50	
guide steeve	. 570	Tolerance mm : + 0.50	
travel mm	: -9.42	Rated speed rpm : 1000	
Tolerance mm		+	
	40.5	+	
Rated speed rpm	: 1010	Rated speed rpm : 901	
guide sleeve travel mm	: 18.06	† rack travel mm : 12.70	
CLOVE HAII	. 10.00	Т	

N06

Rated speed rpm Tolerance 1/min rack travel mm rack travel mm Tolerance mm Rated speed rpm	: 4.00 : 0.50 : ← 0.50
Rated speed rpm rack travel mm	
Rated speed rpm	: 938
Tolerance 1/min	: + 4
rack travel mm	: 4.00
rack travel mm	: 0.50
Tolerance mm	: ← 0.50
Rated speed rpm	: 1000
Rated speed rpm	: 903
rack travel mm	: 12.70
Rated speed rpm	: 939
Tolerance 1/min	: + 4
rack travel mm	: 4.00
rack travel mm Tolerance mm Rated speed rpm	: - 0.50
Rated speed rpm	: 904
rack travel mm	: 12.70
Rated speed rpm	: 940
Tolerance 1/min	: + 4
rack travel mm	: 4.00
rack travel mm	: 0.50
Tolerance mm	: ← 0.50
Rated speed rpm	: 1000
Rated speed rpm	: 905
rack travel mm	: 12.70
Rated speed rpm	: 941
Tolerance 1/min	: + 4
rack travel mm	: 4.00
rack travel mm	: 0.50
Tolerance mm	: + 0.50
Rated speed rpm	: 1000

-	rack travel mm Tolerance mm	: 13.70 : + 0.05
	ANEROID/ALTITUDE COMPENSATOR TEST	
	SETTING	
	Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 13.75 : ← 0.05
+	Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 8.50 : + 0.20
+	MEASUREMENT	500
+	Rated speed rpm	
† †	Pressure hPa rack travel mm Folerance mm	: 320 : 9.80 : + 0.25
-	Pressure hPa rack travel mm Tolerance mm	: 820 : 12.40 : + 0.05
+	FUEL DELIVERY CHAR	RACTERISTICS
	Aneroid pressure hPa Rated speed rpm	: - : 500
+	Del. quantity cm3/1000 strokes	: 218.0
‡	Tolerance cm3/1000 strokes	: + 1.0
+	Check tolerance cm3/1000s.	: +- 6.0
+++++++++++++++++++++++++++++++++++++++		
+	End of test specif	fication sheet

TORQUE CONTROL
Rated speed rpm : 850

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 11.08.97 Test oil : ISO 4113

Combination No. : 0 402 946 025

Injection pump

Pump designation : PES6P12GA32GRS8033 EP type number : 0 412 926 025

Governor

Governer design. : RQV250...1000PA1239

: -3

Governer no. : 0 421 814 178

Cust. part No. : 1383494

Customer-spec. information Customer : SCANIA : DSC 915 Motor

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C : +- 2.0 Tolerance °C

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 100 Tolerance l/h : + 20.0

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

: 251.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.00 Tolerance mm : + 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm: 20.50 Tolerance mm : + 0.20

Firing order : 1-5-3-6-2-: 4

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.30

Check

tolerance *NW : ← 0.75

Start of delivery blocking

: **←** 0.50 Tolerance

Check

tolerance *NW

: +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 600

	+	
Rack travel in mm Tolerance mm	: 12.90 : + 0.05	Rated speed rpm : 470 guide sleeve travel mm : 4.09
Del. quantity cm3/1000 strokes	: 300.0	Tolerance mm : +- 0.25
		Rated speed rpm : 1470
Tolerance cm3/1000 strokes	: +- 1.0	guide sleeve travel mm : 11.50 Tolerance mm : +- 0.50
Check tolerance cm3/1000s.	: + 8.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Spreed		Rated speed rpm : 600
Tolerance cm3/1000 strokes	: 8.0	Aneroid pressure hPa : 1500 Del. quantity
Check tolerance cm3/1000s.	: 12.0	cm3/1000 strokes : 300.0 Tolerance
	+	cm3/1000 strokes : $+$ 1.0
	+	Check tolerance
	+	cm3/1000s. : + 8.0
Rated speed rpm	: 250 +	Spreed
	7.0	Tolerance
Rack travel in mm	,	cm3/1000 strokes : 8.0
Tolerance mm	: ← 0.10 +	Check roterance
Del. quantity	. (0.0	cm3/1000s. : 12.0
cm3/1000 strokes	: 40.0	
Tolerance		
cm3/1000 strokes	: +- 3.0	CONTROL : FUED
Check tolerance		CONTROL LEVER
cm3/1000s.	: + 6.0	control lever
Spreed Tolerance	Ť	position degree : 57.0
	: 4.0	tolerance degree : +- 4.0
Check tolerance	1.0	toterance degree : +- 4.0
cm3/1000s.	: 8.0	control lever
(IIID7 10005.	· 0.0	position degree : 120.0
	I	tolerance degree : + 4.0
(B) SETTING OF IN	LIECTION PUMP	toterance degree 4.0
WITH GOVERNOR	T	RATED SPEED
WITH GOVERNOR	1	rack travel mm : 11.90
	<u> </u>	Rated speed rpm : 1045
GUIDE SLEEVE TRAV	EL 1	Tolerance 1/min : +- 5
00000 000000 111110	1	Check
Rated speed rpm guide sleeve	: 1058	speed 1/min : +- 10
travel mm	: 7.89	rack travel mm : 4.00
Tolerance mm	: +- 0.15 +	Rated speed rpm : 1235
	+	Tolerance 1/min : + 15
Rated speed rpm	: 250 +	Check
guide sleeve	+	speed 1/min : +- 20
travel mm	: 1.33	
Tolerance mm	: ← 0.20 +	rack travel mm : 0.50
	7/0	Tolerance men : +- 0.50
Rated speed rpm guide sleeve	: 748	Rated speed rpm : 1350
travel mm	: 6.17	
Tolerance mm	: + 0.25 +	

N09

†	Tolerance mm : +- 0.15
LOW IDLE	Pressure hPa : 760 rack travel mm : 12.15
1	Tolerance mm : +- 0.05
control lever position degree : 89.0	
tolerance degree : +- 4.0	Start interlock
toterance degree . += 4.0	Start Intertock
control lever	Rated speed rpm : < 190
position degree : 25.0	Rated speed rpm : > 170
tolerance degree : + 4.0	
+	Check
Setting point w/out bumper spring +	speed 1/min : < 210
+	Check
Rated speed rpm : 150 +	speed 1/min : > 150
†	
CRT mm min. :> 9.80	
Ť	FUEL DELIVERY CHARACTERISTICS
Testing:	
Rated speed rpm : 250	Aneroid pressure
Rated speed rpm : 250 rack travel mm : 7.60	hPa : 1500
Tolerance mm : +- 0.10	Rated speed rpm : 1000
Totel arte likil	Del. quantity
Rated speed rpm : 300	cm3/1000 strokes : 295.0
1,000	Tolerance
	cm3/1000 strokes : +- 4.0
TORQUE CONTROL +	Check tolerance
Rated speed rpm : 600	cm3/1000S. : +- 8.0
rack travel mm : 12.90	
Tolerance num : >= 0.05	
+	Aneroid pressure
Rated speed rpm : 1000 +	hPa : -
rack travel mm : 12.90 +	Rated speed rpm : 500
rack travel mm : 12.90 + Tolerance mm : + 0.10	Del. quantity
+	cm3/1000 strokes : 172.0
	Tolerance
ANEROID/ALTITUDE +	cm3/1000 strokes : +- 1.0
COMPENSATOR TEST	Check tolerance
†	$cm3/1000s$. $: \leftarrow 6.0$
CETTANG	
SETTING	
Rated speed rpm : 500	STARTING FUEL DELIVERY
Pressure hPa : 1500	STARTING FOLE PEETVERT
rack travel mm : 12.90	Rated speed rpm : 100
Tolerance mm : + 0.05	rack travel mm : 20.50
_	Tolerance mm : + 0.50
Rated speed rpm : 500	Del. quantity
Pressure hPa : - +	cm3/1000 strokes : 265.0
rack travel mm : 9.80	Tolerance
Tolerance mm : + 0.20 +	$cm3/1000$ strokes : \leftarrow 20.0
+	Check tolerance
MEASUREMENT +	cm3/1000s. : +- 24.0
+	
Rated speed rpm : 500	
Pagaguage hDa . 725	
Pressure hPa : 325 + rack travel mm : 10.55 +	LOW IDLE
rack travel mm : 10.55 +	COM TOCE

N10

Rated speed rpm	:		250
Rack travel in mm Tolerance mm Del. quantity	:	+	7.60 0.10
cm3/1000 strokes Tolerance	:		40.0
cm3/1000 strokes	:	+-	3.0
Check tolerance cm3/1000s. Spreed	:	+-	6.0
Tolerance cm3/1000 strokes			4.0
Check tolerance	•		
cm3/10t)0S.	:		8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 09.09.97 Test oil : ISO 4113

Combination No. : 0 402 946 026A

Injection pump

Pump designation : PES6P120A720RS8045

EP type number : 0 412 926 028

Governor

Governer design. : RQV350...1100PA1305K

Governer no. : 0 421 815 967

Cust. part No. : 1388633

Customer-spec. information Customer : SCANIA : DST1174M Motor

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 3.0 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 80
Tolerance l/h : +- 10.0

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

bar : 251.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 3.65 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance °NW : +- 0.75

Start of delivery blocking

Tolerance : +- 0.10

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

+	
Rack travel in mm: 11.75	Rated speed rpm : 460
Tolerance mm : +- 0.05 -	guide sleeve
Not guantitus	travel mm : 4.07 Tolerance mm : +- 0.25
Del. quantity - cm3/1000 strokes : 302.0	L Toterance half 1. 7- 0.25
CIII37 1000 301 0Ke3 1 302.0	Rated speed rpm : 1400
Tolerance	guide sleeve
cm3/1000 strokes : + 1.0	travel mm : 13.50
-	Tolerance mm : +- 0.50
Check tolerance	
cm3/1000s. : +- 9.0	CHINE CLEENE DOCTTION
Spreed	GUIDE SLEEVE POSITION
opi ced	
Tolerance	control lever
cm3/1000 strokes : 8.0	position degree : - 1
	Rated speed rpm : 1237
Check tolerance	La Danis Annual Samuel 42.75
cm3/1000s. : 12.0	Rack travel in mm : 12.75 Tolerance mm : +- 1.30
	L TOCETATION IN THE 1.30
-	
Rated speed rpm : 350	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 4.10	Rated speed rpm : 1100
Tolerance mm : ← 0.30	- Aneroid pressure - hPa : 1500
Del. quantity - cm3/1000 strokes : 30.0	hPa : 1500 Del. quantity
Tolerance	cm3/1000 strokes : 302.0
cm3/1000 strokes : + 3.0	Tolerance
Check tolerance	cm3/1000 strokes : + 1.0
cm3/1000s. : + 6.0	Check tolerance
Spreed	$cm3/1000s.$: \leftarrow 9.0
Tolerance -	Spreed
cm3/1000 strokes : 4.0	Tolerance
Check tolerance	cm3/1000 strokes : 8.0
cm3/1000S. : 8.0	Check tolerance : 12.0
	- CM5/10005. : (2.0
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	
†	CONTROL LEVER
CLUDE SUEEVE TRAVEL	- - control lever
GUIDE SLEEVE TRAVEL	position degree : 65.0
Rated speed rpm : 1166	tolerance degree : +- 4.0
guide sleeve	-
travel mm : 10.16	control lever
Tolerance mm : ← 0.15	position degree : 119.0
	tolerance degree : +- 4.0
Rated speed rpm : 350	00750 00550
guide sleeve	RATED SPEED rack travel mm : 10.70
travel mm : 2.00 - Tolerance mm : + 0.20 -	Rated speed rpm : 10.70
TOTAL BUILD 1 0.70	Tolerance 1/min : +- 5
Rated speed rpm : 755	Check
guide sleeve	speed 1/min : +- 10
travel mm : 6.14	-
Tolerance mm : +- 0.25	rack travel mm : 4.00

Rated speed rpm Tolerance 1/min Check speed 1/min rack travel mm Tolerance mm Rated speed rpm	: 1247 : +- 15 : +- 20 : 0.50 : +- 0.50 : 1350
LOW IDLE	
control lever position degree tolerance degree	: 73.0 : +- 4.0
control lever position degree tolerance degree	20.0 : + 4.0
Setting point w/o	out bumper spring
Rated speed rpm	: 250
CRT mm min.	: > 6.50
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 350 : 4.10 : + 0.30
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1100 : 11.75 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 700 : 10.90 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1100 : 1500 : 13.75 : +- 0.05
Rated speed rpm Pressure hPa rack travel mm	: 1100 : - : 7.10

Tolerance mm	: + 0.20
MEASUREMENT	
Rated speed rpm	: 1100
Pressure hPa rack travel mm Tolerance mm	: 340 : 8.35 : + 0.25
Pressure hPa rack travel mm Tolerance mm	: 800 : 10.65 : + 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure NPa Rated speed rpm Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
LOW IDLE	750

LOW IDLE			
Rated speed rpm	:		350
Rack travel in mm Tolerance mm Del. quantity	:	+	4.10 0.30
cm3/1000 strokes	:		30.0
cm3/1000 strokes	:	+-	3.0
cm3/1000s. Spreed	:	+-	6.0
Tolerance cm3/1000 strokes	:		4.0
Check tolerance cm3/1000s.	:		8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 04.09.97

Test oil

: ISO 4113

Combination No. : 0 403 466 175

Injection pump

Pump designation : PES6MW100/120RS1240

EP type number : 0 413 406 239

Governor

Governer design. : RSV400...950MW2A395

Governer no. : C 420 085 283

Cust. part No. : 3930113

Customer-spec. information

Customer : CDC

Motor

: 6 CT-830 Motor : 6 CT-83 Power KW : 160.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

Tolerance bar : + 1.5

: 208.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0

Tolerance bar : +- 1.0

Prestroke mm : 3.35
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 : +- 0.50 Tolerance

Check

tolerance *NW : ← 0.75

Start of delivery blocking

*NW after s.o.d. : 8.00

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 950

Rack travel in mm : 13.15

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 154.0

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Tolerance -	ł Tolerance
cm3/1000 strokes : + 1.0	cm3/1000 strokes : +- 1.0
	Check tolerance
Check tolerance	cm3/1000s. : +- 4.0
cm3/1000s. : +- 4.0	Spreed
(1107/10003)	Tolerance
Canad	
Spreed	· · · · · · · · · · · · · · · · · · ·
	Check tolerance
Tolerance -	cm3/1000s. : 7.5
cm3/1000 strokes : 4.0 -	
-	
Check tolerance -	
cm3/1000s. : 7.5	CONTROL LEVER
	+
·	control lever
	position degree : 93.0
Rated speed rpm : 400 -	tolerance degree : +- 4.0
· · · · · · · · · · · · · · · · · · ·	
Rack travel in mm: 5.80	RATED SPEED
Tolerance mm : + 0.30	rack travel mm : 12.15
Sel. quantity -	Rated speed rpm : 990
cm3/1000 strokes : 20.7	Tolerance 1/min : +- 5
Tolerance -	i oterance mini . ' J
cm3/1000 strokes : $+-$ 2.0	nook though the company of 00
	rack travel mm : 4.00
Check tolerance	Rated speed rpm : 1040
$cm3/1090s$. : \leftarrow 4.5	Tolerance 1/min : +- 15
Spreed	†
Tolerance	rack travel mm : 0.85
cm3/1000 strokes : 3.5	Tolerance mm : + 0.55
Check tolerance -	Rated speed rpm : 1200
cm3/1000s. : 5.5	
	rack travel mm : 4.00
-	Rated speed rpm : 1055
(B) SETTING OF INJECTION PUMP -	Tolerance 1/min : +- 15
WITH GOVERNOR -	
-	
GUIDE SLEEVE POSITION -	tow idle
•	†
•	
control lever -	control lever
position degree : - 3	position degree : 68.0
Rated speed rpm : 800 -	tolerance degree : +- 4.0
-	+
Rack travel in mm: 0.65	Setting point w/out bumper spring
Tolerance mm : +- 0.35	+
	Rated speed rpm : 400
governor spring -	rack travel mm : 5.30
pre-tension -	rack travel mm : 5.30 Tolerance mm : + 0.10
click setting x : 4.00	1 0000
Telox Secting A . Tiou	Testing:
	T resumy.
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 400
FOLL LORD DELIVERS HE FULL FORD STOP	
D-4-d and day : 050	rack travel mm : 5.80 Tolerance mm : +- 0.30
Rated speed rpm : 950	Tolerance mm : +- 0.30
Aneroid pressure	†
hPa : 1200 -	rack travel mm : 2.00 Rated speed rpm : 480
	Rated speed rpm : 480
Del. quantity	r water speed ipm : 400
cm3/1000 strokes : 154.0	Tolerance 1/min : + 30

TORQUE CONTROL	
Rated speed rpm	: 950
rack travel mm	: 13.15
Tolerance mm	: +- 0.05
Rated speed rpm	: 750
rack travel mm	: 13.15
Tolerance mm	: ← 0.10
ANEROID/ALTITUDE	
COMPENSATOR TEST	
SETTING	
Rated speed rpm	: 500
Pressure hPa	: 1200
rack travel mm	: 13.15
Tolerance mm	: ← 0.10
Rated speed rpm	: 500
Pressure hPa	. 10.05
rack travel mm	: 10.95 : + 0.05
Tolerance mm	, +- U.UJ
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa	: 750
rack travel mm	: 11.90
Tolerance mm	: +- 0.15
Pressure hPa	: 600
rack travel mm	: 11.30
Tolerance mm	: +- 0.10
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	. 1206
hPa Pated spaed spm	: 1200 : 750
Rated speed rpm Del. quantity	. 750
cm3/1000 strokes	: 157.2
Tolerance	· · · · · · · · · · · · · · · · · · ·
cm3/1000 strokes	: 2.0
Check tolerance	
cm3/1000s.	: ← 5.0
Spreed	
Tolerance cm3/1000 strokes	: 6.0
	: 6.0
Check tolerance	
Check tolerance cm3/1000s.	: 9.0

Aneroid pressure			
hPa	:		-
Rated speed rpm	:		500
Del. quantity			
cm3/1000 strokes	:		119.1
Tolerance			
cm3/1000 strokes	:	+-	1.0
Check tolerance			
cm3/1000S.	:	+-	4.0

STARTING FUEL DELIVERY

Check hydraulic start locking and unlocking device with 500...1000 hPa.

Rated speed rpm	:		100
rack travel mm	:		20.00
Tolerance mm	:	+-	1.00
Del. quantity			
cm3/1000 strokes	:		145.0
Tolerance			
c.m3/1000 strokes	:	+-	10.0
Check tolerance			
cm3/1000S.	:	+-	13.0

LOW IDLE

Rated speed rpm	:		400
Rack travel in mm Tolerance mm Del. quantity	:	+-	5.80 0.30
cm3/1000 strokes	:		20.7
Tolerance cm3/1000 strokes	:	+-	2.0
Check tolerance cm3/1000s.	:	+	4.5
Spreed Tolerance			
cm3/1000 strokes	:		3.5
Check tolerance			
cm3/1000s.	:		5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 04.09.97 Test oil : ISO 4113

Combination No. : 0 403 474 021E

Injertion pump

Pump designation : PES4MW100/720RS1181

EP type number : 0 413 404 107

Governor

Governer design. : RSV400...1000MW1A348

Governer no. : 0 420 085 183

Cust. part No. :

Customer—spec. information Customer : LIEBHERR Motor : D924TI-E A2

Power KW : 132.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C : ← 2.0

Overflow valve : 1 417 413 049

Inlet press. bar : 1.5

Test nozzle holde assembly : 0 681 343 009

Opening pressure

: 173.5 bar Tolerance bar : ← 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : ← 1.0

Prestroke mm : 3.05 Tolerance mm : 4- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270 Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 13.40

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 184.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed	+ Tolerance
	+ cm3/1000 strokes : 4.0
Tolerance cm3/1000 strokes : 4.0	Check tolerance cm3/1000s. : 7.5
Check tolerance cm3/1000s. 7.5	
	CONTROL LEVER
Rated speed rpm : 400	control lever position degree : 100.0 tolerance degree : + 4.0
Rack travel in mm : 5.00 Tolerance mm : +- 0.20	+ RATED SPEED
Del. quantity cm3/1000 strokes : 23.0 Tolerance	rack travel mm : 12.40 Rated speed rpm : 1025 Tolerance 1/min : + 5
cm3/1000 strokes : +- 2.0 Check tolerance	rack travel mm : 4.00
cm3/1000s. : +- 4.5 Spreed	Rated speed rpm : 1075 Tolerance 1/min : + 10
Tolerance cm3/1000 strokes : 3.5 Check tolerance	rack travel mm : 1.00 Tolerance mm : + 0.70
cm3/1000s. : 5.0	Rated speed rpm : 1175
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 4.00 Rated speed rpm : 1085 Tolerance 1/min : + 10
GUIDE SLEEVE POSITION	LOW IDLE
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35	control lever position degree : 70.0 tolerance degree : +- 4.0
	Setting point w/out bumper spring
<pre>governor spring pre-tension click setting x : 3.25</pre>	Rated speed rpm : 400 rack travel mm : 4.10 Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
Rated speed rpm : 1000	CRT mm min. : > 19.00
Aneroid pressure hPa : 1250	Testing:
Del. quantity cm3/1000 strokes : 184.0 Tolerance cm3/1000 strokes : +- 1.0	Rated speed rpm : 400 rack travel mm : 5.00 Tolerance mm : +- 0.20
Check tolerance cm3/1000s. : ← 4.0 Spreed	TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 13.40

Tolerance mm	: +- C.05
Rated speed rpm	: 500
rack travel mm Tolerance mm	: 13.40 : +- 0.05
Rated speed rpm rack travel mm	: 700 : 13.40
Tolerance mm	: +- 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm	: 550
Pressure hPa	: -
rack travel mm Tolerance mm	: 11.60 : + 0.05
Rated speed rpm	: 550
Pressure hPa	: 1230
rack travel mm Tolerance mm	: 13.40 : + 0.05
MEASUREMENT	
Rated speed rpm	: 550
Pressure hPa	: 540
rack travel mm Tolerance mm	: 12.10 : + 0.05
Pressure hPa	: 650
rack travel mm Tolerance mm	: 13.00
ocerance mm	: ← 0.10
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	. 1250
hPa Rated speed rpm	: 1250 : 500
Del. quantity cm3/1000 strokes	: 184.0
Tolerance	
cm3/1000 strokes Check tolerance	: +- 2.0
cm3/1000s.	: +- 5.0
Spreed Tolerance	
cm3/1000 strokes Check tolerance	: 6.0
cm3/1000s.	: 9.0
	•

•	
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1250 : 700 : 190.0 : +- 2.0 : +- 5.0 : 5.0 : 550 : 149.0 : +- 1.0 : +- 4.0
	4 V solenoid activated
control lever se	start position in max. tting.
Rated speed rpm	: 100
rack travel mm Tolerance mm Del guantity	: 20.00 : ← 1.00
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: ← 1.00 : 135.0 : ← 5.0
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: ← 1.00 : 135.0
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: ← 1.00 : 135.0 : ← 5.0
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: ← 1.00 : 135.0 : ← 5.0 : +- 8.0
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. LOW IDLE Rated speed rpm Rack travel in mm Tolerance mm	: ← 1.00 : 135.0 : ← 5.0 : +- 8.0
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. LOW IDLE Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	: ← 1.00 : 135.0 : ← 5.0 : +- 8.0 : 400 : 5.00
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. LOW IDLE Rated speed rpm Rack travel in mm Tolerance mm Del. quantity	: ← 1.00 : 135.0 : ← 5.0 : +- 8.0 : 400 : 5.00 : ← 0.20
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. LOW IDLE Rated speed rpm Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: ← 1.00 : 135.0 : ← 5.0 : +- 8.0 : 400 : ← 5.00 : ← 0.20 : 23.0

Check tolerance cm3/1000s.	:	5.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 02.05.90

Test oil

: ISO-4113

Combination No. : 0 402 746 815

Injection rump

Pump designation : PES6P120A720RS7135

EP type number : 0 412 726 807

Governor

Governer design. : RQV325...850PA848

: -2K

Governer no. : 0 421 815 170

Cust. part No. : 313GC5173P2

Customer-spec. information

Customer : MACK TRUCKS
Motor : E6 275 4VH

Power KW : 202.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40.0 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 011

Inlet press. bar : 1.50

Overflow quantity

min. L/h : 165.0 Tolerance L/h : +- 5.0

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

: 208.5

Tolerance bar : + 1.5

Test Lines : 1 680 750 008

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Outside diameter : 6.00

x inside diameter: 2.00

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

rer values _____

BEGINNING OF DELIVERY

Test pressure bar: 18.0

Tolerance bar : ← 1.0

Prestroke mm : 2.80 Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50

Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2

Phasing

: 0-60-120-180-240

: -300

Tolerance

: **←** 0.50

Check

tolerance *NW

: **←** 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 850

Rack travel in mm : 12.05

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 182.00

cm3/1000 strokes : +- 1.00

Tolerance

Check tolerance cm3/1000s. : +- 4.00 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance : 9.0 cm3/1000s.Rated speed rpm : 325.0 Rack travel in mm : 4.60 Tolerance mm : **←** 0.10 Del. quantity cm3/1000 strokes : 35.00 Tolerance cm3/1000 strokes : +- 3.00 Check tolerance cm3/1000s. : +- 5.00 Spreed Tolerence cm3/1000 strokes : 8.0 Check tolerance cm3/1000s.: 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 325 guide sleeve travel mm : 1.30 Tolerance mm : + 0.10Rated speed rpm : 450 quide steeve : 2.95 travel mm : **←** 0.15 Tolerance mm : 850 Rated speed rpm guide sleeve travel mm : 6.30

Tolerance mm : + 0.10: 1000 Rated speed rpm guide sleeve

: 7.80

: +- 0.10

control lever position degree : -1

FULL LOAD DELIVERY AT FULL LOAD STOP : 850 Rated speed rpm Aneroid pressure : 900 Del. quantity cm3/1000 strokes : 182.00 Tolerance cm3/1000 strokes : +- 1.00Check tolerance cm3/1000s.: +- 4.00 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 56.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.00 : 905.0 Rated speed rpm Tolerance 1/min : +- 5.0 rack travel mm : 4.00 Rated speed rpm : 1040.0 Tolerance 1/min : +- 15.0 rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1150 LOW IDLE control lever

position degree : 11.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 325 rack travel mm : 4.6

Rated speed rpm : 275

travel mm Tolerance mm

GUIDE SLEEVE POSITION

CRT mm min. : 1.50

Testing:

: 325 Rated speed rpm rack travel mm : 4.60 : + - 0.10Tolerance mm

TORQUE CONTROL

: 850 Rated speed rpm rack travel mm : 12.05 : + -0.05Toterance mm

Rated speed rpm : 600 : 12.65 rack travel mm : + 0.05Tolerance mm

Rated speed rom : 700 : 12.60 rack travel mm : + - 0.10Tolerance mm

: 500 Rated speed rpm rack travel mm : 6.20 Tolerance mm : +- 6,20

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 600 Pressure hPa : 900 : 12.65 rack travel mm : + 0.05Toterance mm

MEASUREMENT

Rated speed rpm : 600

: 9.70 rack travel mm Tolerance mm : **←** 0.20

: 215 Pressure hPa : 10.35 rack travel mm : + 0.05Tolerance mm

Pressure hPa : 360 rack travel mm : 11.70 Tolerance mm : **+-** 0.20

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

: 900 : 600 Rated speed rpm

Del. guantity

cm3/1000 strokes : 213.50

Tolerance

cm3/1000 strokes : +- 3.00

Check tolerance

cm3/1000s. : +- 6.00

Spreed Tolerance

cm3/1000 strokes : 8.00

Check tolerance

cm3/1000s. : 12.

Rated speed rpm : 400

Del. quantity cm3/1000 strokes : 146.00

Toterance

cm3/1000 strokes : $\leftarrow 2.00$

Check tolerance

cm3/1000s. : ← 4.00

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 9.70 : -- 0.20 Tolerance mm

Del. quantity

cm3/1000 strokes : 180.00

Tolerance

cm3/1000 strokes : +- 20.00

Check tolerance

cm3/1000s.: **←** 30.00

LOW IDLE

Rated speed rpm : 325.0

Rack travel in mm : 4.60 Tolerance mm : +- 0.10

Del. quantity

cm3/1000 strokes : 35.00

Tolerance

cm3/1000 strokes : $\leftarrow 3.00$

Check tolerance

: +- 5.00 cm3/1000s.

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

: 12.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 31.12.96 : ISO 4113

Combination No. : 0 403 466 154

Injection oump

Pump designation : PES6MW100/120RS1238

EP type number : 0 413 406 237

Governor

Governer design. : RSV500...1100MW2A370

Governer no. : 0 420 085 253

Cust. part No. : 3926880

Customer-spec. information

Customer : CDC Motor : 6 CT Power KW : 154.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. $^{\circ}$ C : 40 Tolerance $^{\circ}$ C : \leftarrow 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0

Tolerance bar : +- 1.0

Prestroke mm : 2.80 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50

Tolerance mm. : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : ← 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 8.00 Tolerance : \leftarrow 0.50

Check

tolerance °NW : + 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

: 15.00 travel

Difference * CS : 2.00

Rated speed rpm rack travel mm Tolerance mm Rated speed rpm CRT mm min. Testing: Rated speed rpm rack travel mm	: 4.75 : ← 0.10 : 100 : > 19.00	+++++++++++++++++++++++++++++++++++++++	Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: +- 2.0 : +- 5.0 : 6.0
Tolerance mm TORQUE CONTROL	: ← 0.10	 	Areroid pressure hPa Rated speed rpm	: - : 500
Rated speed rpm rack travel mm Tolerance mm Rated speed rpm	: 11.60 : + 0.05 : 750	+++++++++++++++++++++++++++++++++++++++	Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 117.0
rack travel mm Tolerance mm	: 12.50		cm3/1000s.	: ← 3.0
ANEROID/ALTITUDE COMPENSATOR TEST		+	STARTING FUEL DEL Rated speed rpm rack travel mm	: 100
SETTING		‡	Tolerance mm Del. quantity	: +- 1.00
Rated speed rpm Pressure hPa		‡	cm3/1000 strokes Tolerance cm3/1000 strokes	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 10.40 : + 0.20	+++++++++++++++++++++++++++++++++++++++	Check tolerance cn3/1000s.	
MEASUREMENT		+ +	LOW IDLE	500
Rated speed rpm	: 500	†	Rated speed rpm Rack travel in mm	
Pressure hPa rack travel mm Tolerance mm	: 850 : 11.90 : ← 0.20	+	Tolerance mm Del. quantity cm3/1000 strckes	: ← 0.10
Pressure hPa rack travel mm	: 590 : 10.90	Ī	Tolerance cm3/1000 strokes Check tolerance	: ← 2.0
Tolerance mm		Ţ ‡	cm3/1000S. Spreed Tolerance	: + 4.5
FUEL DELIVERY CHA	ARACTERISTICS		cm3/1000 strokes Check tolerance cm3/1000S.	
Aneroid pressure hPa Rated speed rpm Tolerance mm		+++++++++++++++++++++++++++++++++++++++	End of test speci	fication sheet

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